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The American Journal of

CLINICAL MEDICINE

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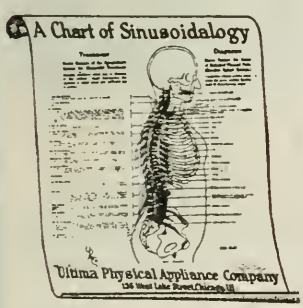

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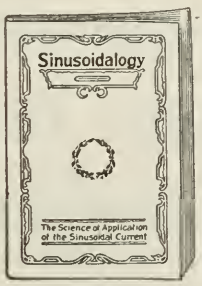

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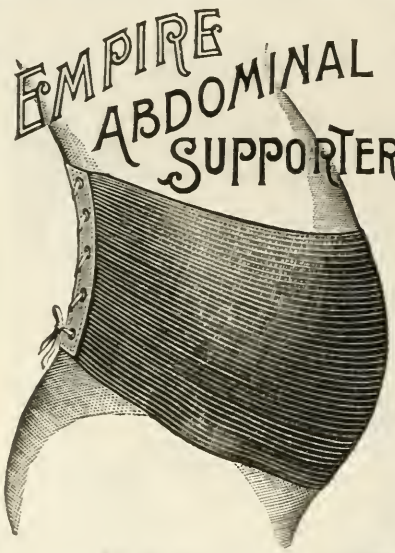

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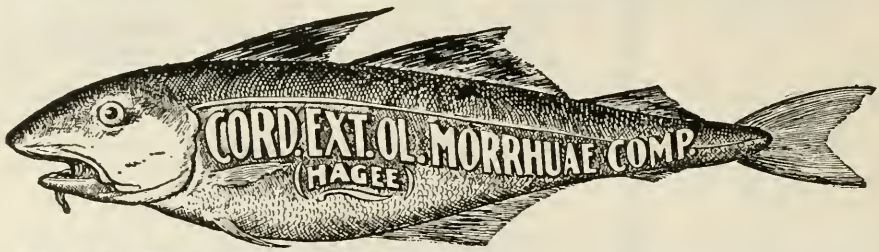

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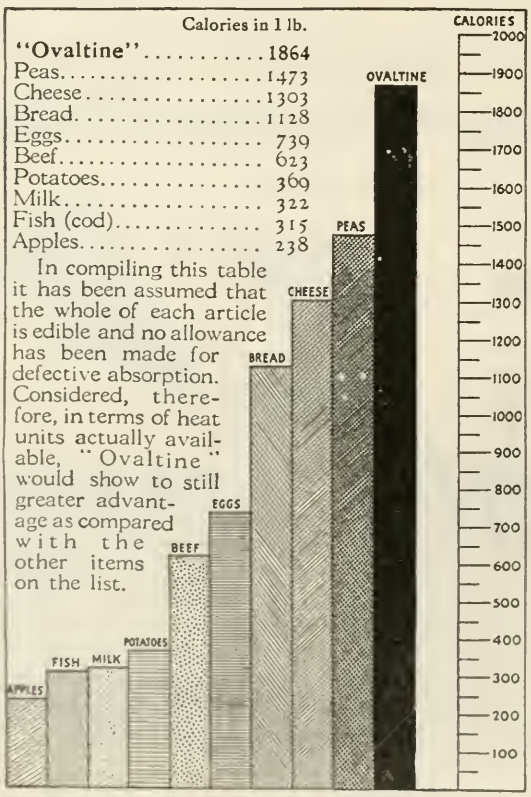

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The American Journal of
CLINICAL MEDICINE
Dependable Therapeutic Fact for Daily Use

Vol. 24. No. 11 November, 1917

Uterine Hemorrhages

THERE is in *The New York Medical Journal* an article in which Asa B. Davis discusses the control of uterine hemorrhage. It is a good article—we said that it appears in the *New York Medical Journal* —but, yet, we feel that possibly some useful additions can be made to the therapeutic procedures there enumerated.

Doctor Davis tells of eighteen cases of hæmophilia neonatorum that were treated with calcium lactate, gelatin, adrenalin locally applied, and various other drugs. Compresses were applied over any bleeding surfaces within reach. Where sutures were made, blood quickly appeared at the suture holes. The application of adrenalin stopped bleeding temporarily, only to return with increased force. No effect could be recognized from calcium or gelatin. Only one baby lived — cause unknown. These cases occurred during a period of eighteen years. Then came twelve in a single year. Doctor Welch conceived the idea of treating these with injections of fresh human blood-serum, 20 to 30 mils (Cc.) three times in each twenty-four hours. All of these recovered, even those apparently hopelessly moribund when the injections were begun with. Although not uniformly successful since then, this so far remains the most effective treatment. We personally advocate atropine in such cases; also, since this hemorrhage is frequently associated with a syphilitic taint, active use of the remedies for that disease might be employed.

Anemic menorrhagia requires regulation of the habits, less work, more sleep, adjusted diet, and taking of tonics. All of which is very well and amounts to nothing—it is waiting for time to work a cure —if that be. Meanwhile, for these cases, where in young unmarried girls menstruation comes too often, is too profuse, and lasts too long, apocynum is a specific. By all means, give iron, if you can get it to stay with the patient. Also, regulate the personal and domestic hygiene; especially keep the bowels regular with the simplest nonirritant saline laxative. Add the apocynum, getting a reliable preparation and giving not quite enough to induce irritation of the bowels. Sometimes iron, in any shape, increases the hemorrhage, in which case, it

is too much of a weakling to practice man-medicine.

Moreover, take your ointment of red oxide of mercury, U. S. P., and reinforce it by adding more red oxide of mercury, until you have a strength that will loosen the epidermis at the third application—then you will have something you can depend upon to rid your patients of boils and styes.

How we do like people who can laugh at themselves! —"David Grayson."

THE DERMATOLOGIST AS AN INTERNIST

We have so often insisted upon the fact that no disease, however localized, actually affects and influences only a limited portion of the organism, but that in every case the totality of the organs is involved more or less, that it comes as a pleasing and satisfying confirmation of our assertion when we find attention called to this same point with respect to skin diseases, and this by Dr. John A. Murray (*Urol. & Cut. Rev.*, July, 1917), who deplores the paucity of facts relating to the etiology of skin diseases; and he justly concludes that this lack can be remedied by a sufficiently deep study of maladies of this order. However, this can not be accomplished merely by historical and pathological investigations, but, only by careful and continued research concerning the diseased body as a whole and its separate organs and functions. So strongly is Doctor Murray convinced of the correctness of his position, that he has elaborated for his personal use a record and question sheet, in which provision is made for the study of all bodily functions, and which he proposes for general adoption.

It goes without saying that in all skin affections the condition of the digestive, assimilative, and eliminating organs is of paramount importance. It is now well established that nervous influences are potent factors in various skin diseases; consequently, the nervous system and the mental state, or psyche, of the patient call for examination. Anomalies of the ductless-gland system may be concerned etiologically, as is evidenced, for instance, in the hyperpigmentation in Addison's disease, as well as in numerous other well-known conditions. Existing pulmonary tuberculosis may elucidate the occurrence of a tuberculide, while focal infections of various kind have been known to be responsible for psoriasis and eczema. Furthermore, the question of anaphylaxis, in the form of food sensitization, is such a live one that it surely ought to be part of the study of the patient.

All these, besides other, suggestions are excellently grounded, and Doctor Murray's undertaking, as a step in a direction that promises great things in the ultimate elucidation of many problems that are obscure in the domain of the dermatologists, merits fullest recommendation.

It takes no inspiration to see what is right. The only difficulty is, to do it. —F. Marion Crawford.

WHEN IS GASTRIC ULCER NOT GASTRIC ULCER?

The stomach is a very peculiar organ, being, on the one hand, seriously disturbed or upset, reflexly, by a comparatively simple intrinsic cause, and, on the other, manifesting almost no disturbance even when the seat of very extensive disease. One should not be too hasty, therefore, in concluding that the stomach is diseased, just because the patient complains of symptoms referable to that organ, or that the stomach is not diseased, because the patient does not complain of pain in the epigastric region or of nausea and vomiting.

These remarks of Dr. M. L. Harris, in *Medicine and Surgery* for last July (p. 524), may condone the somewhat flippant title of this little article; especially if one takes into consideration that they introduce a study of five cases of distress referred to the stomach, in all of which gastric ulcer had been diagnosed by competent internists, when operation, subsequently, failed to reveal such a lesion; the actual pathologic condition being remote from that organ, its function being disturbed in a purely reflex manner. In all of the five cases reported, vomiting had been a dominant symptom, sometimes even accompanied by vomiting of blood. Yet, all of the subjects presented characteristics that might have guided the attention of the examining physician in the right direction, had the possibility of reflex vomiting been taken into account.

Furthermore, the author points out, correctly, that in obscure cases of disease only an actually complete clinical and pathologi-

cal history will make a correct diagnosis possible. The burden of his discussion is well condensed by him, as follows:

1. A more careful history taking. There is a great tendency nowadays to neglect to elicit a good chronological history of the events of the case; too great a desire to make a quick diagnosis by some blood examination, some test-tube reaction, some serum test, with too little attention being paid to the patient himself. These laboratory tests are of great value when properly controlled by antecedent events, but, present conditions are all of little or no value when considered by themselves. A good history chronicled may be looked upon as one of the best evidences of scientific ability and skill in clinical medicine.

2. Beware of "dominating" symptoms. Their suggestive influence upon the mind is most subtle and often biases the judgment. Keep the mind neutral until all data are in.

3. In cases of this class, in which a clear diagnosis cannot be made, medical treatment of the innocent stomach should not be continued year after year, without observing improvement; rather, the abdomen should be opened, in order to discover and correct the real trouble.

While the "tired business man" goes to the movies to get a laugh, he builds better than he knows. He not only gets his laugh, but he exercises the emotional side of him, irons out his emotions so to speak. By so doing he is better prepared to meet life's battles. —Douglas Fairbanks.

THE QUESTION OF ASPIRIN

Three floating bits we pick from the currents swifty rushing by. The Bayer aniline works announce having instituted legal proceedings for preventing an American concern using the trademarked name "Aspirin" in marketing or selling any acetylsalicylic acid not manufactured and sold under this name by the German house. Simultaneously Lehn & Fink, of New York, announce to the drug trade that they are ready to defend any suit begun, by the latter firm, against any person that may buy or sell aspirin marketed by Lehn & Fink. At the time, a news-note informs us that the Imperial German Government has forbidden German citizens to pay any debt they may owe citizens of the United States.

Certainly, an autocracy has a prompt and effective way of dealing with matters, a way that contrasts unpleasantly with the divided counsels and dilatory methods of a democracy. We do not deal with innuendo or make charges without the testimony to back them——but, why, oh why, has Congress allowed the German dye and chemical houses to hold up the United States, extinguish our dye manufacture and extort fortunes from the sick in the way they have been doing for so many years, and then even now, when we are at war with them, permit their continued exploitations? Has Germany granted our people reciprocal privileges, in the way of patents and copyrights and trademarks?

A citizen of the Commonwealth of Great Britain complained to Cromwell that the French on some pretext had seized his vessel. The Lord Protector at once ordered his officers to seize the first French ship that came within reach and hand it over to the aggrieved man, to be held until the French government made good the loss. There was mighty little red tape unrolled in settling that case.

This journal is not jingo. We do not strut about with a chip on our shoulder. We make no yawps about licking all creation. But, we should like to see a little more of a disposition to insist upon respect for the rights of American citizens and upon a little more business-acumen in our tariff and patent and trademark laws, so as not to discriminate unduly agains our own selves.

As to this aspirin matter, there seems to be a loophole for controversy. The patent on aspirin has expired; but how about the trademarked name? The two are not necessarily of like import, and we may have the legal right to make and sell aspirin as acetylsalicylic acid, not, though, to use the name aspirin. This is a question for the lawyers. We may be able to give some good reason for prescribing aspirin instead of some other salicyl preparation (can you?), but, we blanch when asked for a legal opinion. As for ourselves, we suspect that the only reason for our using aspirin is that it is marketed in convenient tablets and is pushed by its advertisers.

THE DAY OF THE COMEBACKS

The great war already has absorbed a large number of the younger and more active members of our profession, and it is

becoming evident that many more will be required. Yet, even without this stupendous demand, it was recognized that we did not have a great surplus of physicians. The demands of the American people upon the medical profession have been expanding fast, while the supply has been greatly curtailed. Many of the colleges have been forced to close their doors and the classes of those remaining have shrunk. As the regular profession has elevated its standards and separated by a wider line the profession from the public, the irregulars have crowded into the gap. The openings left have been filled by the ever increasing swarms of practicians who do not require long years of study and searching examinations to approve the fitness of candidates—and, as with the rest of the world, Young America moves in the direction of the least resistance.

One consequence of the war-demand is, that the older men are being recalled to the field of active practice. Leaving their well-earned retirement, these seniors find an active demand for their services, instead of the sharp competition that shunted them into the discard. The "boy" struts about clad in khaki, his meditations professional bent solely upon matters military, his waking and slumberous visions turned to fair France. He plunges beneath the waves with Captain Nemo and soars athwart the blue empyrean with far-away Icarus. The pattering hail of shrapnel, the bursting shell, the scorching flame of the Greek fire, the rolling clouds of chlorine fill his thoughts with the newly arising problems of today. The baby with the bellyache, the querulous woman with nerves, the fellow in whose misty brain the fumes of last week's booze still linger do not arouse his interest. Even the prospect of a fat fee for an operation fails to detach his attention from the man-size problems engrossing the profession.

Father once more must take upon himself the duties. He will find awaiting him two comprehensive tasks — to recall to memory half-forgotten lore, renew his former skill, and to take up actively the study of the newer methods and means that the youngster has been talking about so much. The art of physical examination, the study of disorder of physiologic function, the psychology based upon years of experience and knowledge of heredity must be reinforced by the aids brought by the modern laboratory. It is not hard to assimilate the work of the x-ray-specialist and the physiologic chemist with that of the older diagnostician. There is a wealth of values in the older therapeusis that we may expect to see once more utilized. We can really empty the colon without making an abdominal section and can dissipate migraine without abscission of the gasserian ganglion.

We will risk the indignation of the young by suggesting that it is a mighty lucky thing for the public that the Old Doctor is thus torn from his retirement and made to come back. He will make good as he never did before. He will restore the lost balance between surgery and medicine and show what inestimable benefits can be obtained from drugs by those who really know their possibilities.

Then, "when this cruel war is over" and "Johnny comes marching home," the senior will lay down the burden again and betake himself to the orange-grove, which has been growing while he attended the sick. Ten times the more will he relish the rest and the recreation, because of this interval of resumed activities. Time to give to his hobbies, time to watch the green things grow, the fruit to ripen, the palms to shoot up. How good things taste when they are of our own production—'member that big dish of smoking-hot green corn on the table last Christmas? Yum, yum!!! The strawberries ripening in January? Go 'way, chile. The fish right out of the bay, the crabs, the oysters, the wild geese and ducks —"Hello, Central, give me the ticket office."

Laughter does not always mean the same thing. Some men laugh from the sheer delight of living. Others laugh at wit or humor of a good order. Others laugh at tales of treachery or cunning, where one man gets the better of another through meanness. —Douglas Fairbanks.

PSYCHE-SOMA

Every little movement has a meaning—of its own. Every popular belief has back of it some truth. Every cult and every religion that has won adherents in numbers has back of it some of those eternal truths that the human mind recognizes as such and that lead it to accept much dross and nonsense for the sake of the self-evident truths. Followers of Jesus, of Mary, of Buddha, of Mahomet are such because of

these maxims of elementary verity that appeal to all of us and to all humanity as warranting a respectful hearing and possible adherence to an entire system of theologic structure for their sake.

Believe it? Suppose you were without the slightest knowledge of the Nazarene, had never read the Beatitudes, and came upon the dying words of Buddha, "Be kind to all that lives," would you not be attracted to the spirit that prompted those words?

Suppose that, as a similarly ignorant stranger, you read of the Judge whose only admonition to the convicted sinner was, "Go and sin no more," could you fail to be impressed? No man lives but reverences motherhood. We need not be Moslems to appreciate the humor and the common sense behind the remark, "Since the mountain will not come to Mahomet, Mahomet will go to the mountain."

We might go over every faith that has won large sections of mankind and find things in each that apppeal to our innate consciousness of right.

Since (and before) the day of Perkins' tractors, wave after wave of interest in suggestive methods have passed over the world, and each has won a following. Each has told the same story, albeit in different terms. There is naught that is new in Christian Science save the name. Each of these suggestion-forms has won support, because each contains some truths. Mesmer accomplished real cures. So did Cagliostro. So did Mrs. Eddy. Every physician knows well how often he would bless his lucky stars if he might teach his patient to "forget it." We likewise have learned that the quacks who introduced hydrotherapy, massage, the various forms of electricity, Osteopathy, Chiropractic, Weltmerism, and all the rest were, each, partly right.

This is likewise true as to Homeopathy, as also the earlier sects that discarded minerals from their materia medica and employed native plant-remedies exclusively. The plants they employed really are of value, and this particular movement has done humanity an invaluable service by developing their uses.

But, curiously enough, each and every one of these healing cults fell into the same identical error, that of trying to make their particular scheme exclusive and universally applicable. Take Homeopathy: We know very well that the action of small doses and of large doses of certain drugs is an opposite one; but, there is a huge logical hiatus between recognition of this fact and the assumption that all remedies come under this rule and that *no other curative action is possible than that of like curing like.*

Take Christian Science: We are well aware that we can powerfully influence our patients toward recovery by the calm assurance of success; but, to apply this method to all cases indiscriminately is a crime. Thousands of cases of organic disease of heart, lungs, kidneys and other organs nowadays are passing through the early curable stages without treatment, because the subjects are being taught to believe in the nonreality of disease. On the other hand, thousands are being maltreated by otherwise excellent methods of therapeusis, that would prove invaluable in other forms of illness, because, forsooth, the practicians are conversant with only a single branch of the therapeutic art.

With all this addiction to the principle that the mind influences the vital processes of the human body, these cultists seem utterly to ignore the converse fact of the influence exerted over the mental functions by physical disorder. Is this because there is no room for the formation of a new sect here? One would think that the mental healer of whatever description would find little difficulty in accepting a truth that is as self-evident as that upon which his present practice is based; still, it does seem that he cannot form a conception of the other half of his proposition.

And, yet, we all know that a toxin flood pervading the blood will influence the mental state and induce dulness, melancholy, a well-defined state of psychic morbidity. We know that other forms of toxemia may induce other disorders, such as the choler of plethora, the delusions of grandeur of the paretic, the obliteration of the moral sense shown by the cocainist. And how much more is there awaiting the investigator in this field! The deviser of new "isms" seems strangely negligent of the opportunity. It has plenty to recommend it—novelty, illimitable possibilities, wide applicability.

However, there is one fatal objection—there is demanded a really thorough training in medicine and especially a knowledge of physiologic function and of pathologic aberration, also of psychology in its widest sense. Something radically different from the enormous assumptions of the Freudian psychanalyst is required here. Something

more than the minute anatomic studies of the surgeon. Something more than the timid and uncertain interference of the internist, who eternally is "trying" remedies of the properties and applicabilities of which he possesses little real knowledge.

What is required is, a cerebral development that just now would be engrossed in the task of rolling back the last wave of organized robbery and murder the world will experience. We must wait until the war is done and sanity resumes her earthly sway over the minds of men.

"The real work, that is of substantial and lasting benefit to the community at large, has to be done on a mediocre level. It is just as much to be a common soldier in the ranks as to be a general that leads. We cannot all be generals."
—Dr. George F. Butler.

A COMMON COLD

The United States Public Health Service deems the common cold of sufficient importance to justify the issuance of a special pamphlet upon it—Supplement No. 30. In this, Surgeon General Blue gives some facts that may not be known, as such, to all; so, we pass them along.

The cold is the most prevalent illness in the United States and by no means trivial in its possibilities.

It is always an infection, by germs received from another human being.

It is an acute infection of the lining membrane of the nose, throat, tonsils, and larger bronchi. It may run into pneumonia, or may be the inception of tuberculosis.

Drafts and prolonged exposure are active only in lowering the vitality and in predisposing to the infection.

And, the author might have added that any description of a cold is superfluous.

Prophylaxis lies in personal sanitation: keep the mouth and nose clean; do not spread infection by unguarded sneezing, coughing, and so forth.

Hardening the body is of doubtful efficacy [With this dictum we disagree.]

As for the treatment: Do not use alcohol or depressants. Take a laxative saline and go to bed. Ventilate the rooms; moisten the air; quit kissing; sterilize things in use.

So far the Bulletin. Now, in accordance with our custom we shall add somewhat to the question of the treatment.

For years this writer has been prescribing and recommending the inhalation of formalin vapor, to break up a cold in its incipiency. The efficacy of the remedy is incontestable; however, there is reason to suspect that the formalin may affect the eyes injuriously. The action of wood-alcohol on the eyes is well known, and, when wood-alcohol is burned, formalin is one of the products. With this possibility of harm presenting itself, we think it best, for the present, to withdraw our suggestion and warn against formalin inhalation for colds. Now to proceed:

Dissolve 20 grains of calx iodata in a glass of hot water and take of it a sip every few minutes. If begun early enough, this frequently will abort the attack. A 20-grain dose of quinine and a hot mustard foot-bath and wrapping up warmly in bed for a night will, sometimes, accomplish the object. More effective, although objectionable, is an opiate. The time-honored Dover's powder or a ¼-grain of morphine hypodermically, together with 1/100 grain of atropine, is a remedy whose efficacy it is not easy to explain. It is followed, though, by headache and a sense of depression, the consequence of toxemia that we can readily understand.

We should find better agencies in the recent therapeutic acquisitions. Gargles and sprays of chlorazene solution have been tried by members of the CLINIC staff and proved of great value. Doctor Burdick suggests that dichloramine-T in oil spray would be just about the thing to prevent contracting a cold as well as to aid in curing it. The idea seems so good that we shall put it to clinical test at once.

In every case, empty the bowels completely at once. There is no surer means of lowering the vital resistance to the point where the everpresent microorganisms may effect their lodgment than to feed to the exposed tissues fecally contaminated blood. A brisk cathartic carries away serum enough to lower the vascular pressure and lessen the hyperemia of the swollen mucosa; while local measures, to restore its tonicity, may cut the invasion short. Personally, we have never applied a solution of chromic acid directly to the nasal mucosa, still, we believe it would effect a cure. This agent induces a contraction that is singularly enduring.

Some other antiseptic gas, besides formaldehyde, might be tried. Chlorine and the fumes of burning sulphur, though, are

too irritating and their action is too persistent.

If the profession were to give this exceedingly common malady a little of the attention they squander on maladies that the busy clinician sees possibly but once in a lifetime, we might have the treatment preconized.

Another and graver phase of this subject is entered when we consider the question of the mucous infection as either the opening stage of a malady like rheumatism, meningitis or poliomyelitis, or as opening the door for superinfection by such a disease. We have long been aware of the importance of jugulating pharyngeal and tonsilar attacks to prevent more serious affection, and see no reason for neglecting the nasal infections.

Gordon and Flack obtained valuable results in the treatment of meningococcus carriers from the use of chlorazene. This was reduced to a very fine spray with superheated steam. Dunham and Dakin (*British Medical Journal*) substituted a high-pressure jet of air for the steam, the fine spray being inhaled from a double cone of celluloid. They employed a ½ per cent solution of Chlorazene with an isotonic salt solution, for at least one-half an hour. This effected a very considerable reduction in the nasal bacteria.

Chlorazene is insoluble in oils, but the corresponding dichloramine is readily dissolved in eucalyptol, and the solution can be diluted with paraffin. In this way a 2 per cent solution of dichloramine was obtained. By its use the action of the agent was maintained much longer that when a watery solution was employed. The latter was first applied to clear the tract from secretions, after which the oleaginous application was made. Its efficacy may be judged from the fact that in one hour the number of colonies on the agar plate was in one case reduced from 105,600 to 10, following two applications of the oil.

Considering the perils consequent on the assemblage of many children in public schools, it seems wise that at times when there is a possibility of the presence of disease carriers, with meningitis, poliomyelitis, diphtheria, rheumatism, the eruptive fevers, etc., that the family should be provided with this remedy and the apparatus for its use, and instructed to employ them as soon as the children return from school every day. Nasopharyngeal catarrhs should not be looked on as trivial affairs for home management but as demanding prompt and effective treatment by the family physician.

Professor Huxley relates that he was once talking with an eminent fashionable physician about the "vis medicatrix naturae," when the latter replied: "Stuff! Nine times out of ten Nature does not want to cure the man, she wants to put him in his coffin."

DIPHTHERIA TREATMENT WITHOUT ANTITOXIN

A hot discussion was going on concerning the treatment of diphtheria. One party declared in favor of beginning with the injection of 40,000 units of antitoxin, while the other claimed that, if a smaller dose really were sufficient, the excess would act as an unantidoted toxin and possibly destroy life. Which was right?

A retired physician who had been listening to the discussion was appealed to. "Would you give 40,000 units?" "Yes," was his reply.

"If it were needed, I should give 100,000 units, not otherwise, though. But, while admitting the priceless value of antitoxin, I should not limit myself to that one remedy. Its efficacy is not now a matter for discussion; however, the most enthusiastic of its advocates does not lay claim to results under its use, better than a mortality of 4 percent; and this we secured from other remedies before antitoxin was discovered."

That there was anything at all available for diphtheria, except antitoxin, seemed to be so novel an idea to the youngsters that the old doctor was asked about the old-time methods. Whereupon he cited a case.

A certain dwelling for twenty years had "murdered" with diphtheria, every child that moved or was born into it. There was a cesspool which contained a spring. The seepage from this ran under the kitchen floor and oozed up between the floorboards whenever anybody walked over it. At last, the pool was emptied and filled up with earth, the floor was taken up, the dirt removed and a new floor laid, upon a proper foundation. The diphtheria ceased from that house.

"But, what did you do while waiting for this sanitary reform?" "Applied the same method—local disinfection."

At this, the hearers began to display that bored expression so well known to

anybody who during the last twenty years has attempted to say aught anent diphtheria except antitoxin. Still, the older man went on to state that he had applied the method with a thoroughness that scarcely was approached by any of his colleagues, even when it was the one reliance. His case:

A child two years old, in exceedingly unsanitary surroundings, had diphtheria. Beginning in the throat, the disease had spread to the mouth and ulcers appeared at the corners; both ear-drums had given way and discharged pus; this also appeared at the inner canthus of each eye; the nasal passages were involved and the discharge was bloody. The stench of the discharge simply was horrible—so much so that one visitor, upon coming into the sick-room, fainted. The child lay in a moribund condition, the eyes rolling up so as to show the whites, the forehead hot, the extremities cold, the pulse suppressed. The physicians who had been in attendance over a week had retired from the case, pronouncing the patient hopeless—a prognosis in which the newly summoned physician fully concurred. However, he went to work.

The nasal passages were syringed thoroughly with Marchand's peroxide of hydrogen, full-strength solution, every fifteen minutes during the waking-hours and also the child was awakened for this every half-hour. Freshly prepared chlorine-solution (euchlorine), reinforced with tincture of ferric chloride, was administered, in full strength every two hours, so as to get the local effect as well as the constitutional. Whenever the nasal discharge was tinged with blood, the nose was washed out with solution of chromic acid, increased in strength until the bleeding stopped. Feeding was pushed to the utmost limits of the child's digestion. The sanitation of the premises was made right. The child's father kept sober and took upon himself the entire charge of the nursing. In one week, six quarts of the peroxide solution had been used up, and the child was out of danger.

The cure depended upon two remedial measures; the environment was made sanitary, the local disinfection was really thorough. Neither measure would have accomplished the cure without the other. Both had to be absolutely perfect to win success. You, who deride the use of local antiseptics in diphtheria, how often have you known them to be applied with such energy and with the surrounding conditions similarly corrected? Half measures have brought these methods into disrepute.

The present writer can testify to the exceeding value of domestic sanitation in dealing with infectious maladies. During his service with the health department of a great city, he had, in one year, over 2000 cases of infectious disease come under his observation—diphtheria, scarlatina, typhoid fever, and smallpox. These were attended by all classes and conditions of physicians and they exhibited every degree of severity. But, without exception, as soon as the health authorities had had the premises and surroundings put in sanitary condition, the malignancy subsided, the severe cases became simple ones, and the patients took that turn for the better which the attending doctor piously attributed to the last medicine he had ordered. This writer had studied and taught sanitary science; he *learned* it from that experience.

The delver into antiquities might with profit investigate the reports upon the use of calx sulphurata (calcium sulphide) in diphtheria. The strangest contradictions appear in these reports. One man obtains the most-striking benefits from this drug, then, in the next epidemic, it fails him utterly. One wins brilliantly with it, but, when he brings his remedy to the assistance of some hard-pressed colleague, is dumbfounded to find that it has no influence whatsoever. Those who are easily bluffed out of their self-confidence conclude that they merely imagined it had done good; others could give no explanation, unless it were the varying malignancy of the cases. These do not seem to have ever associated malignancy with faulty sanitation and environment or to have suspected that the quality of the sulphide was at fault.

We now know that calx sulphurata is one of the most difficult agents for the manipulations of the pharmaceutic chemist and that a salt of full U. S. P. quality by no means is certain to be dispensed by the retailer. As an instance of this difficulty take this fact. The specimen that showed the highest degree of purity this writer ever has seen proved impossible to manipulate; namely, could not be made into granules or tablets by men of long experience and of unquestionable skill.

Leading Articles

Prevention and Treatment of Disease with Dead Bacteria

By C. W. CANAN, M. D., Ph. D., Orkney Springs, Virginia

THE object of this paper is, to impress upon readers the importance of administering bacterial vaccines, not only for preventing certain diseases, but, as a curative means in all diseases caused by living organism.

That germs are the cause of disease has been conclusively demonstrated time and time again in various ways, notably through animal-experiments; which, as likewise the practical routine work of serum-therapy, possess the distinct advantage that no factor of a psychic nature enters into the procedure to lead us astray. The animal is inoculated and can be killed at any stage and the diseased process carefully studied and noted.

To prove that a germ causes a given disease, it is necessary always to find that particular microbe in that disease; to obtain from it a pure culture in some medium, (such as gelatin, bouillon, blood-serum), then to inoculate this into a susceptible animal, this resulting in the same disease, and finally finding the same organism in the diseased animal and again securing from this a pure culture. I believe that the day is not far off when all disease-conditions will be found to be owing to these microscopic organisms, either in single or in mixed infection.

The Pathogenic Germs

In a general way, the germs that are known to produce disease are divided into three groups: cocci, bacilli, and spirilli. Those included in the first division are ball-shaped germs; the bacilli are longer in one diameter than in the other, making them rod-like in shape; the spirilli are crooked in shape. All of these varieties are small single-cell organisms and vary in size from 1-5000 to 1-50,000 of an inch. They live, grow, and multiply by absorbing, digesting, and assimilating a variety of food-substances with which they come in contact. Some varieties thrive best upon one kind of food, while others do best upon another. They also have the power to secrete a ferment that predigests or prepares the food when not found suitable for its assimilation. If it were not for this function, they often would fail to entrench themselves and the disease characteristic of the type would not then develop. All varieties thus far known multiply by division, each resulting in two, and this constantly repeating itself. The time required for this is very short, they often dividing while they are being watched under the microscope.

The Organic Resistance

One characteristic feature of the spreading of disease is the fact that the absorption of a minute number of organisms is followed by the production of an enormously increased amount in the invaded body. This is conclusive proof of the property of self-multiplication and indicates that the reproduction of these disease-producing germs (in most cases) takes place within the body so invaded, because here they either find or prepare a suitable soil in which to thrive. Another proof is the fact that every contagious or infectious disease is as specific and true a copy of the case which preceded and caused it as are animals and plants of their progenitors. It is true that variations occur in both in-

stances, and the law of evolution probably applies to both equally. However, these are exceptions and not the rule.

The Theory of Infection and Immunity

With reference to the whole field, many definite conceptions prevail that tend to obscure the causative relation between the infecting organism and the resistance or the susceptibility of the individual to its invasion; the activities of the tissue-cells in their fight to destroy the invading host; and the defensive mechanism of the tissue-cells necessary to overcome the invading enemy and cure the disease. These indefinite conceptions are gradually clearing and, as investigation and study goes on, all these mysteries will be solved and we shall be able to treat many maladies with precision where now they are treated empirically and on general principles.

The fact that in many diseases recovery from one attack rendered the individual immune to subsequent attacks of that special disease furnished the pioneers in this work a foundation upon which to build. Then began the inoculation of animals with live germs, and it was found that, after the animal had recovered from the disease produced by this inoculation of live germs, subsequent inoculations failed to produce disease.

Then experimenters went further and found that animals inoculated with killed germs were, for a brief period, rendered immune to the disease produced by this strain or family of the live germs. It was also discovered that fresh normal blood when placed in an incubator would destroy a limited amount of a great many varieties or kinds of germs. When more germs are added than the blood can destroy, their number is found greatly diminished during the first few hours of incubation. After this, the remaining live germs begin to grow and multiply rapidly in the blood. Then, again, the blood of an animal that has been previously immunized will also destroy a limited amount of a great variety of germs, but, will destroy a much greater number of the kind to which the animal has been immunized.

These facts go to prove that normal blood contains a limited amount of some substance that tends to defend the animal-economy against the inroads of these germs, but, that this substance is soon used up or consumed in the germ-destroying process, after which the germs are able to multiply rapidly; further, that this germ-destroying substance in the blood can be enormously increased against the particular germ to which an animal has been immunized.

All this evidence proves that recovery from these diseases produced by micro-organisms is due to the development of immunizing substances by the defensive mechanism of cell-life. This immunizing substance—variously called agglutinins, lysins, opsonins, etc., but, more generally called antibodies—has been definitely determined, also the amount present in the blood of a given case.

The Nature of Antibodies

By a long list of experiments with animals, it was found that these germ-destroying substances that develop during the fight with the harmful invading organisms are ferments evolved by the tissue-cells in the latter's effort to overcome the enemy and thereby restore the normal state of the body.

On the part of the invading germs, they must, after gaining possession, live, grow, and multiply in the fluids and tissues of the body and, in order to be able to do this under adverse surroundings, they are able to secrete extracellular or intracellular ferments to prepare or predigest these substances so that they not only may live, but, be able to carry on a successful warfare.

On their part, also, the tissue-cells, in their effort to overcome the invading host, possess the power of producing some peculiar ferment or ferments capable of exerting a destructive or digestive influence upon the germs present in the tissues. Hence, it is plain that, if the physician can administer something that will aid the tissue-cells to secrete these ferments in greater abundance, he has helped nature to win its battle in its natural way. As a matter of fact, this is being done every day. Inasmuch as these tissue-cells can be trained or so stimulated as to develop these ferments in sufficient amounts, the battle becomes a comparatively easy one.

Indeed, we can go further and say that we can train these tissue-cells to secrete the special ferment necessary to destroy a particular kind of germ. A patient so treated is said to be immune to that particular germ, as in vaccination for smallpox. His

tissue-cells have become sensitized to this variety of microorganism, and, should it gain access to the body, these trained cells begin their deadly work and soon the invader is overpowered and the disease fails to develop. On the other hand, if the tissue-cells have had no training in fighting a certain kind of germ and that organism should be very virulent, the chances are that the germs will gain the upper hand and the disease will develop in all its fury and in all probability destroy life.

Immunization Against Infection

From the foregoing facts, it becomes clear that, if we wish to avoid germ invasion—in other words, if we wish to avoid the infectious diseases—we must have our cells immunized against the inroads of these germs.

In the early study of this subject, the investigators tried to do this by introducing live virulent germs into the system. However, it was soon discovered that this method was far from satisfactory; that often it caused prolonged periods of illness, while in many instances death itself ensued.

We know now that these cells can be trained and the subject rendered immune to the harmful action of germ-life by injecting into the system killed germs in proper dosage and at proper intervals.

These dead bacteria, when introduced into the human body, do not produce violent reaction, neither do they make the subject ill. At the same time, the tissue-cells treat the dead germs as intruders and deal with them accordingly. These dead bacteria, when introduced, offer no resistance against their own destruction, neither can they secrete any ferments that have a devitalizing influence on the living tissue-cells with which they come in contact. By injecting killed germs, all danger of causing an infection is avoided, while, by properly gaging the doses and spacing the intervals between inoculations, it is possible to have the case under perfect control.

When the cells of a patient have become sensitized for specific ferment production, as a means of self-protection, they then will continue to produce ferments for some time, so that, by repeated inoculations at proper intervals, a high state of immunity can be produced.

By this method, typhoid fever has become almost an unknown disease in the great armies now in the field. The same might be true of this disease in every city, town, and countryside in the land, if only the people would avail themselves of this great blessing. The same is true to a greater or less degree, according to circumstances and kind of disease-condition that we have to deal with in cholera, typhoid fever, typhus, bubonic plague, whooping-cough, pneumonia, bronchitis, cerebrospinal meningitis, scarlet-fever, diphtheria, erysipelas, tuberculosis, and many others. Even hay-fever and colds can be prevented, aborted or cured by this method, according to the stage in which treatment is begun. However, the availability of this treatment does not stop in being a preventive measure; rather, there are few diseases that will not yield to this plan even when the attack is well established.

Early Treatment Important

It should be remembered and impressed upon those who expect to receive this kind of treatment that the results are far more brilliant when begun early in the attack. When an infectious disease has established itself within the body or in some part of it, we know that immunization against the causative organism has not been established, that the tissue-cells under the influence of these live organisms have not been able to produce sufficient of the right kind of ferment to dislodge this special invader. In other words, the virulence of the enemy has been so great that the tissue-cells have not been able to fortify themselves by marshaling their defensive mechanisms. Taking these facts into consideration, it is our duty, as physicians, to assist nature to put the invaders to rout by stimulating antibody production by administering the respective dead bacteria.

Dakin's Dichloramine-T in the Treatment of the Wounds of War

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EDITORIAL COMMENT.—This paper is a portion of an article contributed to "The British Medical Journal" for August 25, 1917. Professor Sweet has recently contributed a more extended article relative to his experience to "The Journal of the American Medical Association.

WE have treated some eighty patients with Dakin's "dichloramine-T"; some have been old cases with foreign bodies lying in the bone, and suppuration did not stop until the foreign body was removed. Fresh cases, in which enough integument was left to permit it, have been treated with dichloramine once and immediately closed, and have healed by secondary intention. Sixteen cases, old and fresh, were cultured after treatment with dichloramine-T for varying periods, of which 11 gave no growth whatever; of the 5 in which a growth appeared, 4 were old cases of deep bone involvement; the only growth was the staphylococcus aureus in 4 cases and in 1 case the pyocyaneus.

The wounds fill rapidly with granulation-tissue of healthy color, which exhibits no tendency to exuberant growth and no inclination to become watersoaked and indolent; the skin edges grow in very rapidly.

These results are no different from those which can be obtained by other methods, and no one would believe them if they were any better. Let me say, therefore, that the surgeons of the unit are agreed that the wounds treated by dichloramine-T are in every way as satisfactory as they have even seen under any method; and two of our surgeons have had previous experience in France, while all are surgeons of long experience in civil practice.

The results along other lines are capable of more definite demonstration, and it is on these that I would lay the most emphasis.

How the Dichloramine-T Is Employed

The new dichloramine solution is made by dissolving the crystals of dichloramine-T in chlorinated eucalyptol and then diluting this solution by the addition of chlorinated paraffin-oil. It is best applied by an oil spray, an ordinary hard-rubber or all-glass atomizer being the most practical method. Metal atomizers are not suitable, since the metal is attacked by the chlorine solution.

This oily solution presents the first great advantage—the dressings do not stick to the wound and the entire act of dressing is relatively painless. The gauze does not have to be separated from the granulations by soaking. It is, therefore, not even necessary in the average wound to place a waterproof protective covering over the bed-linen while dressing, and the necessity of moving the part or the patient is obviated. The old dressing is simply lifted off and the wound sprayed; the force of the spray will dislodge sloughs, and the wound is then covered with a fresh dressing without further manipulation.

It is evident that a very important saving of time results from this simplicity of dressing. One surgeon has repeatedly dressed thirty wounds in ninety minutes—an average of three minutes to each dressing. These figures and the figures to be given later refer to the "acute" wards, where the patients are all bed-patients.

The solution contains enough available antiseptic so that one dressing every twenty-four hours is ample for large deep wounds, and one dressing every forty-eight or seventy-two hours is enough for the simple or more superficial wounds. Since the solution contains so much available chlorine and does not have to be renewed every few hours, the use of the Carrel tube is entirely done away with. The oily solution of dichloramine-T creeps into all the wounds, crevices, and corners, and it can readily be introduced into sinuses by

*Report to the Medical Research Committee. Reprinted from *The British Medical Journal*, Aug 25, 1917.

means of a cotton swab dipped into the solution.

The amount of this new solution needed for wound dressing should be emphasized. At first thought, it would seem that a solution containing oil of eucalyptus and paraffin-oil would be far too expensive for general use, in comparison with eusol. [A mixture of hypochlorites.—Ed.] Forty-two wounds were dressed by one surgeon with 35 mils (Cc.) of the solution; another surgeon dressed 154 wounds with 115 mils. These figures apply to the "acute" wards, and include many compound fractures and extensive buttock- and thigh-wounds.

Saving of Dressing Material Effected

The fact that so little fluid has to be used and that, therefore, only the wound-discharge has to be cared for, results in a tremendous saving of gauze and cotton. I give below a table of the result of a comparison of the amounts of gauze and cotton used during different periods in the four acute surgical wards of the hospital. Each ward is in charge of surgeons of equal skill, and all trained in the same hospital; the nurses, also, are all graduates of the same hospital training-school; in other words, the comparison is not between workers trained in different schools of surgical technic.

Table I.—Gauze and cotton-wool used July 5, 1917

Wards.	Gauze (6-yard rolls.)	Cotton (1-yard rolls.)	Treatment.	No. of Patients
1	12	2.5	Eusol	23
2	10	4	Eusol	22
3	3.5	2.5	Dichloramine-T	23
4	6	2.5	Eusol	25

Taking a longer period, the amount of gauze and cotton used in seven days by three of the "acute" surgical wards is given in table II. Ward 2 changed, during this period, from the use of eusol to the use of dichloramine-T; the figures from this ward are, therefore, not available. The number of patients was the same in the three wards, and the proportion of relatively slight and extensive wounds in each ward was the same.

Table II.—Gauze and cotton-wool used from July 4 to July 10, 1917, inclusive

Ward	Gauze (6-yard-rolls)	Cotton (1-yard rolls)	Treatment
1	72	38.5	Eusol
3	33	7	Dichloramine-
4	45	18	Eusol

This saving of material is of importance in several ways. Not only does it effect a saving of labor from the cotton-field to the hospital, not only a saving in transportation, but, an important saving at the hospital itself. The time taken by the nurses in the preparation and sterilization of material can be utilized for the care of the patients, and to this can be added the saving in time, labor, and material by doing away entirely with the need for the Carrel tubes. The need for so little solution in wound dressing and the fact that the dressing need only be sufficient to care for the wound discharge means that the bed-linen is not wet, with a consequent saving in the moving of the wounded and an increase in their comfort and wellbeing.

The dichloramine-T solution, like all the other chlorine compounds, is a very active lymphagog in fresh wounds, and the amount of wound excretion may be considerable. The lymphagogic effect may be directly watched in suitable wounds. As granulation-tissue develops, the lymph discharge greatly decreases until the wound becomes comparatively dry. The dichloramine-T also possesses to a marked degree the characteristic power of the chlorine solutions, in aiding the digestion and removal of necrotic sloughing tissues. The new solution seems more effective in cleaning up sloughing tissue than do the older chlorine compounds. While the majority of our cases come from the casualty clearing-station in excellent, clean condition, a sufficient number have reached us with necrotic tissue in the wound amply to satisfy us of the rapidity with which the dead tissue is freed under the dichloramine-T. The tendency to secondary hemorrhage is certainly not increased. We have had only one secondary hemorrhage in the series, which includes a number of deep buttock-wounds and cases of exposed great arteries of the arm and leg.

The solution is not irritating to the skin or mucous membrane, except possibly in the rare individual who possesses an idiosyncrasy to the eucalyptus-oil. Such individ-

uals have been reported in dermatological literature. Among the patients treated here, we have encountered only one case of dermatitis, but, since it did not develop until after two weeks' use of the solution and was accompanied by high temperature, it is not clear that it should be ascribed to the eucalyptol or to the well-known action of wound excretion.

The constituents of the solution are stable, although the final combination is not indefinitely stable nor can it be exposed to strong light. It is easily prepared from the constituents. The dichloramine-T which I have was put up in packages of 10 Grams each; the content of one package is dissolved in 75 mils of chlorinated eucalyptol and diluted with equal parts of chlorinated paraffin-oil, as needed; making, therefore, approximately a 6.5-percent solution of dichloramine-T.

The first application of the solution to a fresh wound produces a smarting or burning sensation, which passes away in a very few minutes; in some individuals, this seems quite severe, but, I have yet to see the patient who does not prefer this slight smarting to the real pain of removing a wet dressing which has dried around the edge of the wound. After the second or third application, this smarting sensation on applying the solution seems to have disappeared.

Since the time to treat an infection is before the infection starts, it is hoped that the dichloramine-T solution can be given an early trial at the field ambulance and casualty clearing stations.

Conclusions

Dakin's dichloramine-T, in solution in eucalyptol and paraffin-oil, is of great advantage in wound treatment—even if the final results in wound healing were no better, because—

1. It saves the pain of wound dressing. (2) It effects an appreciable saving of dressing-material. (3) The amount of solution needed is of small bulk. (4) The number of wounds which a surgeon can dress in a given time is far greater than by any other method. (5) The elimination of the Carrel tube simplifies the dressing and the problem of the transportation of the wounded. (6) The elimination of the Carrel tube, moreover, saves the time that is required by the nurse for the periodic flushing.

Accidents and Complications Following Operations for Hemorrhoids

By CHARLES J. DRUECK, M. D., Chicago, Illinois

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EVERY patient experiences some discomfort following an operation for hemorrhoids, while some suffer severely. There always is the element of the personal equation in each case. There is a wide variation in the degree of pain suffered by different patients. Many of the complications occur inversely in proportion to the care of details given the operation and after-treatment. In the ligature-operation, if a groove is cut deeply through the mucous membrane above the dissection, so that the ligature embraces only the mass of veins, the pain will be much less severe than if the mucous membrane is included in the stump. In this operation as performed by the author, there is seldom any severe pain after a few hours. The clamp-and-cautery operation occasions much less pain than do the older types of ligature-operation, although some times there is intense suffering after this operation. In any type of operation, much of the subsequent pain experienced depends upon the amount of pinching, bruising or pulling that has been suffered by the tissues adjacent to the structures removed, and a careful consideration of this fact will spare the patient much unnecessary suffering.

Much of the pain subsequent to a hemorrhoid-operation is caused by spasm of the sphincters and is particularly likely to occur when this has been an important symptom before the operation, as in anal fissure or

ulcerated hemorrhoids. In some of these cases, it may continue for several days, even to the end of convalescence. Hot moist compresses give the most relief.

Edema of the skin sometimes occurs when the operation involves the mucocutaneous border, and particularly if skin tabs that existed have been left unremoved. This condition is very painful and is a frequent source of spasm of the sphincter as well as a contributing factor to delayed healing.

Morphine is the only satisfactory drug to relieve the pain. If only restlessness and nervousness disturb the patient, bromides or similiar mild remedies will suffice, while for the local smarting or burning hot wet dressings or the application of iodoform powder or 10-percent ichthyol are very acceptable.

Pruritus

This most annoying complication is owing to the discharge from the wound evaporating upon and incrusting the newly formed epithelium. Treatment consists in keeping the parts clean by means of frequent baths of warm water, drying carefully and applying a neutral dusting-powder (talcum). If the itching persists after healing is complete, it is caused by a sensory-nerve-filament in the scar-tissue or to some condition other than the operation itself.

Retention of Urine

Strangury and dysuria always occur after the older types of ligature-operation and in more than three-fourths of the other major hemorrhoid-operations. If the reader will refer to the nerve systems of these parts, as they branch from the pudic nerve, he will see how intimately one pelvic organ is associated with another and then appreciate how easily the vesical sphincter is affected by any trauma of the anus or perineum. Intestinal gases accumulating after the hemorrhoid-operation are retained by the patient, unless he is instructed not to do so. This voluntary restraining excites the anal sphincter to spasm and reflexly also the vesical sphincters. Packing the rectum or the use of a tube may have the same effect, and this complication may continue for several days.

Before using a catheter, various schemes should be tried to help the patient to urinate voluntarily, as, for instance: hot moist dressings applied to the anus and pubes, douching the perineum or opening a water-faucet within the hearing of the patient while he sits on a jar or stands before a urinal. If these passively acting measures do not accomplish the result, then give a warm saline enema or flush out the colon. This usually answers the purpose, although, sometimes, it may have to be repeated after a while or the next day. When the enema is expelled, the patient usually urinates at the same time. Unless the demand is urgent, it is well to wait twelve hours and meantime try all of these devices before resorting to the catheter.

The colon-bacillus is always present here and a cystitis brought on by it is a very serious affair. In all cases where retention of urine exists, it is wise to administer hexamethylenamine at once. Of course, the possibility of urethral stricture, vesical calculus, and enlarged prostrate gland or other genitourinary disturbance as a cause of the retention must be thought of.

Period of Confinement

The duration of the confinement after a hemorrhoid-operation varies with the type of the operation. Patients operated upon under local anesthesia and, therefore, less extensively, need keep their bed but a few hours or for the rest of the same day. Following the more extensive operations, the patient is confined to his bed for perhaps a week, although in most instances he may have the liberty of his room or the floor after three days. He may usually return to business in ten to fourteen days, even though healing may not be complete, the subsequent dressings being carried out at the office.

Hemorrhage

Secondary hemorrhage, while not frequent, does occasionally occur, although its probability has been much exaggerated. If the operation is carefully performed and the severed vessels are properly tied or cauterized, there is little danger of subsequent bleeding. If at the completion of the operation an oozing point is noticed, it must be thoroughly cared for before the patient is allowed to leave the table. When secondary hemorrhage does occur, it is usually from some small oozing point that the operator thought would be controlled by pressure, or else was overlooked because of an infolding edge of mucous membrane, or it may follow straining by the patient, the

slipping of a ligature or the tearing away of a necrotic bit during defecation. There is also the variation in coagulability of different patients' blood and the disturbed vasomotor conditions to account for its occurrence and persistence. The hemorrhage may be alarming and it is as liable to happen after one type of operation as it is after another.

When bleeding occurs, it must be attended to immediately. If the bleeding point can not be seen, the patient should be anesthetized, unless his condition forbids, a speculum inserted and the colon thoroughly flushed out with a hot saline solution. All clots are to be removed, the bleeding wound, when found, packed. A rectal plug is made of three pieces of gauze 4 inches wide and 6 feet long, tied into a bundle at one end with a long tape. This taped end of the gauze is carried, by means of a long dressing-forceps, through the speculum to a point in the rectum above the wound and the remainder of the gauze is then carefully packed in, thus filling the ampulla; the speculum then is withdrawn. Two fingers are placed over the anus and the tape passing between them is drawn taut and tied to the roll of gauze outside the anus. This packing is allowed to remain for twenty-four hours.

Infections

Abscess following a hemorrhoid-operation usually results indirectly from trauma during the dilatation of the sphincter (most likely to occur if the stretching is hurriedly performed), a perirectal blood-vessel being ruptured and this resulting in a hematoma which later becomes infected and thus causes a perirectal abscess. Its onset is sudden and characterized by a chill, fever (sometimes as high as 105° F.), restlessness, and local pain. The treatment is immediate, thorough drainage being effected as soon as the abscess is discovered.

Stitch-hole infection may occur, and, if so, the stitch should be removed immediately. This stitch-infection occurs quite frequently and is one of the imperative reasons for making daily examinations. Any rise of pulse rate or temperature attracts attention to this possibility and demands prompt and thorough investigation.

Erysipelas is said to be an occasional complication. The author has never had the misfortune to meet with such, and he believes that it will never occur if the patient has been carefully attended to. If it does occur, the parts should be well dressed with Crédé's ointment.

Anal Stricture

Anal stricture never should occur, and its presence demonstrates lack of attention to details, either during or after operating. If the hemorrhoid-operation is properly performed, the after-treatment carefully watched, and the sphincter and wound are massaged every day, stricture can not occur. Following the Whitehead operation, there always is some narrowing. This is not serious if the wound heals by primary union; if, however, infection occurs and the wound closes by granulation, a stricture is almost certain to result.

Brief on the Tumors of the Urinary Bladder

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EFFICIENT treatment, with a favorable result, in tumors of the urinary bladder depends upon early and accurate diagnosis. At the onset, the usual mild subjective symptoms frequently are such as to lead both patient and physician to procrastinate and avoid complete examination, while trying to control discomfort with anodynes and urinary antiseptics. This reluctance to submit the patient to what may seem to be an unnecessarily minute examination many times has adversely influenced the end-results. There are many very common local diseases that will deceive the inexperi-

enced or careless diagnostician. A chronic posterior urethritis, chronic prostatitis or a simple cystitis may obscure the clinical picture. Here, the history of the case is invaluable.

A stone, malformation, stricture or some kidney lesion may exist at the same time. These conditions often complicate the symptom-complex of neoplasm. Clinically, the growths are classed as benign and malignant. It usually is impossible to determine absolutely the exact type of tumor, and it is characteristic of growths in the bladder that they tend to pass into malignancy very quickly. Microscopically, tumors excised as benign often show cancerous change. Malignant vesical growths are either sarcomata or carcinomata. That most commonly found is carcinoma. Men past middle life are most often affected. The disease progresses slowly at first and the clinical symptoms are few, but, after glandular involvement has occurred, the course is rapid and always fatal. Primary carcinoma of the bladder itself—save as a transformation of papilloma—is not so frequent as is an extension growth from the prostate gland, rectum or adnexa. Sarcomata are rare, occur in children, and, with their rapid growth and metastases, invariably are soon fatal.

The rare tumors—adenomata, dermoids, myomata, fibromata, and angiomata—grow slowly, but, without known cause, may degenerate and take on the characteristics of malignancy. The papillomata are the most common of the socalled benign vesical growths. They usually occur during middle life, often are multiple, and it has been estimated that two-thirds of them become cancerous. The authors believe that, if not removed early, all become malignant.

Symptomatology and Diagnosis.

The primary and most important symptom of vesical neoplasm usually is hemorrhage, although, as will be seen in the series of cases appended, this is not always present. The bleeding usually starts painlessly, without known cause, and the patient may have been enjoying excellent health. The amount of blood varies—continued slight hemorrhage speaks for malignancy, while profuse intermittent hematuria is more characteristic of the early stages of benign papilloma. As the condition increases in severity, some urinary disturbance is evident, increased frequency of micturition being usual. If the patient has been instrumented or ever has had any local infection, a cystitis of greater or less severity ensues, with its particular syndrome added—that is, pain and pus.

We will here discuss briefly the diagnostic methods at our disposal:

Importance of Cystoscopy

The history is important, more especially the facts as to the cause of family mortality, former residence (persons from the tropics may have been infected with filaria sanguinis, echinococcus, etc.), age of the patient, loss of weight, condition of the sexual function, and any other disease associated by the patient with his trouble. A minute inquiry into the onset of the local disturbance is valuable. The time, progress, and variation in severity of the symptoms should be noted. The present condition, as the patient describes it, is a very important point for consideration. In some cases, a general examination should precede the local physical examination. The general condition, temperature, pulse, blood findings, eye conditions, reflexes and fundus, are worthy of serious consideration. The status of the heart and chest is important. Especially it may be wise to examine the lungs for possible tuberculous disease.

Uranalysis makes clear many of the puzzling points of the case. The sediment should be microscopically examined for tissue-cells and bacteria. Fragments of papilloma are diagnostic. A culture and animal-inoculation should be resorted to in cases exhibiting pyuria. Functional renal tests should precede operation and are best taken at the time of the cystoscopic examination. We have been using phenolsulphonaphthalein, with satisfactory results.

Diagnosis of Bladder Tumor

Inspection and palpation of the abdomen sometimes discover abdominal varicosities coincident with large obstructive tumors of the pelvis. The inguinal glands often are discernible. Through the rectum and vagina, the condition of the trigone can be felt, the vesical cavity itself be palpated bimanually, and induration, fixation, and tenderness of the surrounding organs ascertained. Extreme tenderness, with hardening of the prostatic and vesical regions, favors a diagnosis of malignancy. This condition, of course, may obtain in an acute cystitis. In thin subjects, papillomata some-

times are felt as soft, boggy masses between the examining fingers.

The Need of Cystoscopy.

In every case, the patient should be cystoscoped as soon as possible. The diagnosis thus often is rendered absolute, making all other evidences merely suggestive. Air or water distention of the viscus may be resorted to, preferably the latter. Warm boric-acid solutions are best for distention. Cocaine or novocain solution, to allay spasms, and adrenalin, to check capillary oozing, often are necessary. Preparatory antiseptic irrigation, sometimes for a period of several days, makes a dirty bladder easy to examine.

The tumor-masses sometimes fill the bladder to such an extent that the cystoscope can not be used. An x-ray of the parts, after the injection of some fluid opaque to the rays, will outline the extent, position, and character of the growths. We have at different times used collargol, thorium-nitrate solution, and bismuth. The resulting plates were excellent.

In any case in which it is impossible to examine the patient cystoscopically, it is

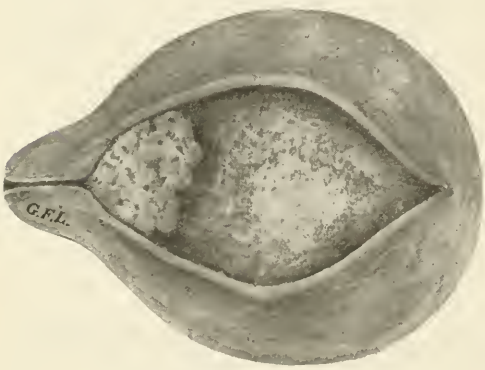

Fig. 1. Cystoscopic appearance of bladder after removal of tumor.

advisable that suprapubic cystotomy be done.

Brief reports of several cases that are somewhat atypical in history are submitted herewith:

Some Case Reports.

Case 1. Man, 49 years of age, in good general health, with no urinary symptoms, was cystoscoped, as part of a routine examination, and a papilloma in the bladder reported. Referred to us for confirmatory diagnosis. The history was absolutely negative—general health good—uranalysis negative. Cystoscopy revealed a pedunculated bleeding tumor of considerable size in the vicinity of the left urethral orifice. The growth clearly was papillomatous. The rest of the bladder appeared normal. There was no irritation of the viscus, Treatment: Tumor removed by means of fulguration at 10-day intervals. Three sittings. A small pink-white "seam" now is all that can be seen cystoscopically. A similar case (Fig. 1) has been reported by us in one of our recent brochures.

Case 2. A man, 35 years of age, had been treated for gleet by prostatic massage, dilation, instillations, et cetera. Uranalysis negative. Symptoms: slight discharge, some frequency, and some polyuria. Stricture was absent. The prostate gland was tender upon palpation. Uranalysis was negative. Cystoscopy showed multiple papillomata scattered about the trigone and the internal urethral orifice. The papillomata disappeared after eight sparkings with the high-frequency current. The symptoms were arrested. No recurrence to date.

Case 3. A woman, aged 60, spinster, had been treated for some months, by a local physician, for vesical irritation. Symptoms: Greatly increased frequency, straining, some blood at times, pain in the back and rectum. Never had had a local examination of any kind. Treatment had been limited to diluents, et cetera. When the patient was brought to the hospital she was urinating every ten minutes. Vulva and urethral orifice were so tender that it was impossible to examine her. Hot sitz baths, morphine, and instillations of argyrol for three days improved the local condition so much that cystoscopy was possible. The capacity of the bladder was about 2 ounces. Cocaine and adrenalin instillations were made. Typic carcinoma of the base of the bladder and internal urethral orifice was found. Suprapubic cystotomy was suggested, with excision and cauterization of the growth, followed by radium dosage. This patient passed from under our care. hence, the subsequent history is unknown

Case 4. Man, age 42. Persistent bleeding at intervals of from six months to a year apart. Had had attacks for five years. No history of gonorrhea. No pain, and uranalysis showed nothing. Under cystoscopy, the bladder appeared normal, save in the vicinity of the internal urethral orifice. Here, a number of enlarged bluish vessels

were noted. Slight bleeding from one of these was observed. Diagnosis: Varices of the vesical neck. Operation was refused and the symptoms still continue.

Case 5. Carcinoma. Man, aged 30, with history of frequent micturition and occasional slight hematuria extending over a period of about two years. General health excellent. The symptoms had not been sufficiently severe to alarm the patient and only upon the urgent request of an intimate physician-friend would he have submitted to examination. Cystoscopy revealed on the left lateral wall of the bladder a papilloma about the size of a large grape. This was removed suprapubically by excision. Five years have elapsed since the operation and cystoscopy still reveals a normal bladder.

In a case of Dr. Lydston's elsewhere reported, there had been no symptoms until a few weeks before coming under observation. Carcinoma was found and successfully treated by operation. (Fig. 2.)

These few type-cases forcibly show in what way the common bladder tumors may easily be overlooked. Early diagnosis makes for quick and permanent recovery, while delay often puts relief beyond hope.

The Treatment.

The treatment of the various tumors, as enumerated, is, of necessity, surgical. For the smaller papillomata, either excision or fulguration through the operating cystoscope is demanded. The choice depends upon the location and size of the growth. Temporary and palliative measures include morphine hypodermically or by rectal suppository, and irrigation of the bladder with hot antiseptic and astringent solutions. Adrenalin and coagulose may be used locally for hemorrhage.

For malignant growths, radical excision, cauterization of the base, and the postoperative use of the x-ray, radium, and, if complicating infections exist, vaccines. The rarer tumors, such as dermoids, fibroids, etcetera, are excised.

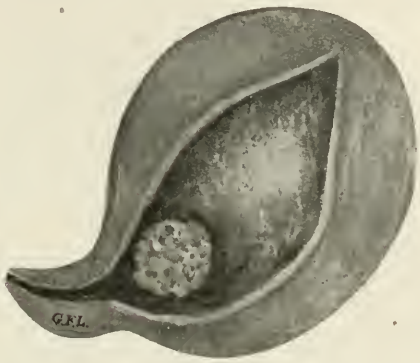

Fig. 2. After successful operation for carcinoma.

To summarize: Bladder tumor is frequent, often unrecognized, and always a dangerous condition. Early cystoscopic examination of every case with obscure bladder or chronic deep urethral symptoms that do not improve quickly under appropriate treatment, is advised. The simplicity and safety of diagnosis for the urologist often is appreciated too late.

The Conservative Treatment of Certain Rectal Lesions

By WILLIAM RITTENHOUSE, M. D., Chicago, Illinois

Professor of Obstetrics, Loyola University.

IN THE minds of the laity, virtually all painful affections of the rectum are lumped together under the name of "piles." So, when a patient states that he or she is a sufferer from piles, it is very important that the doctor should not accept this diagnosis, but should make one, himself, after a thorough examination. So far as the patient is able to tell, the trouble might be piles, polypus, fissure, fistula, pruritus, prolapsus, or even cancer. Unfortunately, as a result of perfunctory examination, the doctor's diagnosis is not always as accurate as it should be. I have seen polypus mistaken for piles, fissure or fistula overlooked, and other mistakes committed that a careful examination would have prevented. I need not go into the details of differential diagnosis, as any one of these conditions may be recognized from the de-

scriptions given in the ordinary textbooks. In this matter, as in so many others, it is thorough, careful, painstaking examination that is needed, and too often not given. I reiterate this fact which I have so often emphasized, even at the risk of being wearisome, because the need of it soon becomes patent to any one who has a consultation practice.

Fistula

The external opening of a fistula may escape notice because when it has existed a long time, it is often found at the apex of a little tag of skin, and may be so small that only a very fine wire probe will enter it. It may be necessary to use the wire stylet of a hypodermic needle to find the opening.

The internal opening of a fistula may escape discovery by the ordinary method of passing a probe through the fistula, with a finger in the rectum, because its course may be too sinuous to be followed by the probe. But, if peroxide of hydrogen be injected into the sinus and a bivalve speculum introduced into the rectum, the most minute opening in the mucous membrane will be apparent by the escape of foam. It no foam escapes into the rectum it is certain that the fistula is external only.

The patient may sometimes help in establishing a diagnosis of fistula if he reports having had repeated "boils," or pimples, on the skin near the anus. Where we meet this history the search for a fistulous opening should be very persistent and thorough. A history of pruritus and much moisture should also be a sufficient reason for a careful examination, for, while it may not always be due to a fistula, it often is. I used to suppose that fistula only came from an ischiorectal abscess of such proportions that there could be no mistaking the history. Probably, in most cases, such an abscess was the cause of the fistula, and I doubt whether such an abscess ever heals without leaving a fistula; for, the perirectal cellular tissue is so loose in texture that pus burrows in it very easily, and the opening in the skin shows such a tendency to contract that it is sure to close before the sinus can heal from the bottom. An ischiorectal abscess is such a painful and disabling affair that the patient is not very likely to forget it, and his report of it is good ground to suspect fistula. But, I find that, in not a few cases of fistula, no such history of a severe abscess is given, the patients report nothing of the sort, or at most a few small boils or pimples. This fact I have never seen mentioned in print so far as I can recall.

The first case of this kind came under my notice about twelve years ago. A man whom I had known many years and who always seemed in perfect health, spoke to me incidentally of having a fistula. Examination showed that he was correct, but, he denied ever having had an abscess, painful or otherwise. On my insisting that there must have been something of the sort, he remembered that he had had several insignificant pimples near the anus which had been slightly painful until they came to a head when he forgot all about them. On my urging operation, and pointing out that he was running the risk of tuberculous infection from the fistula, he refused to have anything done, and to this day he still carries his fistula, yet, apparently, he is in perfect health. Since then I have seen a number of cases that gave no history of a definite abscess.

Lately, I had the opportunity of studying one of these cases in the making. A gentleman of 50 consulted me for itching and moisture around the anus. He had been troubled with this condition for about two years, and, during the same time, he had had occasional painful pimples in that region. I failed to find a fistulous opening, so, I prescribed zinc ointment with a little oil of cade, for the pruritus, and told him to come and see me at once if he had another pimple. A couple of weeks later he appeared again. About an inch from the margin of the bowel was a pimple the size of a large pea—hard and painful on pressure. After two days of hot wet boric acid dressing, it opened and discharged a few drops of pus. Then I passed a probe into it to the depth of two inches up alongside of the rectum; the use of peroxide showed no internal opening. A week later the external opening was so small that only a very fine wire would enter it, and had I not known where to look for it I would have had difficulty in finding it.

The Treatment of Fistula

Several years ago, the treatment of fistula by injecting the sinus full of bismuth paste was for a time quite popular, and many cures were reported. But, there was

also an occasional case of bismuth poisoning. It has been found that injecting the sinus with yellow vaseline gives equally good results. Just why yellow vaseline gives better results than white vaseline I am not quite certain. The fact that the white is odorless, while the yellow has a slight odor of kerosene may suggest the explanation. The white, being ultra-refined, is perfectly bland, while the yellow retains substances sufficiently irritating to stimulate healing in the sluggish tissues of an old sinus. Be that as it may, I have had good results in the few cases where I have used the yellow vaseline. When the fistula has an internal opening, the injection should be repeated more frequently than when there is no opening into the rectum, as some of the vaseline escapes into the rectal cavity. Where there is only the external opening, I usually inject every five to seven days.

When injection fails to cure, as it sometimes does, we are compelled to resort to some more radical method. A fistula which has only an external opening may sometimes be cured by enlarging the opening freely by incision and packing daily with gauze. The incision should not be in a line radial to the anus because that would cut the fibres of the sphincter, but, it should be at right angles to such a line, that is, parallel to the fibres of the sphincter and external to it. This operation will be a failure unless the drainage is very free. It will be found that the incision shows such a decided tendency to close up that it must be enlarged every few days. The moment pus is shut in it begins to burrow, and the sinus, instead of healing from the bottom, grows deeper. The daily packing is also less painful if the opening is kept large.

If the case is seen during the existence of an ischiorectal abscess, early incision followed by the above treatment will usually give a good result and prevent the fistula from opening into the bowel.

Many years ago, I was called to see a large, powerfully built man, who informed me that his "piles" had been very bad for a week. Investigation showed an enormous ischiorectal abscess. On incision, a jet of most evil smelling pus spurted halfway across the room, and his wife never quite forgave me for the terrible job of house cleaning which I had unwittingly provided for her. Moral: Have a bucket ready when lancing a large abscess. The amount of pus was so great that it must have dissected its way all around the rectum, filling the whole pelvis. In this case there followed a perfect recovery without fistula, but, I had to pack the abscess cavity daily with gauze for three months. Had I known then about vaseline-injection, I am convinced that the cure might have been greatly hastened.

Radical Operation for Fistula

When a fistula opens both internally and externally and when it refuses to heal with injections of vaseline or bismuth, the only thing that remains is, the radical operation of passing a grooved director through the sinus, and cutting through all the tissues from one opening to the other, thus converting the sinus into an open wound, which can then granulate and heal from the bottom. Of course, this cuts the external sphincter, and may be followed by incontinence of feces. This event constitutes so serious a calamity for the patient that we may well pause before running the risk of it. Fortunately, in most individuals the internal sphincter is powerful enough to act as a control even though the external one be cut.

Where the pus has burrowed its way around the rectum, forming a circular sinus in addition to the longitudinal one, even the radical operation may be a failure unless great care is taken. The case must be closely watched, and the packing done faithfully every day.

The Treatment of Hemorrhoids

Many unnecessary operations for hemorrhoids are performed because some surgeons do not fully recognize the tendency of piles to get well spontaneously, *if the cause that produced them is removed.* The most frequent cause is, an unduly tight sphincter; others are, constipation and the abuse of purgatives.

The sphincter ani shows a tendency to hypertrophy towards middle life and even earlier in some individuals. As its grasp becomes more and more powerful, the circulation in the hemorrhoidal veins is impeded, and painful affections of the rectum, such as piles or fissure, are the result. The pain causes reflex spasm of the sphincter, the spasm producing more hypertrophy; because it is a law of nature that use of a muscle develops its fibres. Thus, a vicious

circle is established: spasm causes pain, and the pain causes more spasm and hypertrophy.

Now, if the grip of the sphincter be modified by slow dilatation, the relief to the patient is immediate, and, if the dilatation be repeated at proper intervals, it is surprising how rapidly even quite large piles, either internal or external, lose their inflamed condition, diminish in size, and, finally, become insignificant tags of mucous membrane. Of course, there are neglected cases where the amount of pile tissue has become so great that some of it must be removed either by injection and subsequent sloughing, or, by excision. The doctor who expected to cure every case of piles by dilating the sphincter would be as unwise as the one who sought to operate on every case.

The Author's Method

My method may be briefly described. The only instruments I use are four sizes of hard rubber, conical, or rather spindle-shaped, dilators, having diameters of 18, 25, 33, and 39 millimeters. The latter size is seldom required. For very firm and resisting sphincters I also have a two-blade rectal speculum with strong handles that give powerful leverage, and have a set screw.

The patient lies upon his side facing away from me, his knees drawn up as far as possible. With a lubricated finger, I explore the rectum and gage the resistance of the sphincter. Selecting the size of dilator appropriate to the case, it is lubricated and introduced by steady pressure the force of which is regulated by the pain produced. I aim to use that amount of force which will produce a sense of discomfort but not actual pain, and I instruct the patient to inform me when the pressure becomes painful. I have found by experience that this moderation gives better results than the use of force to a painful degree. I continue the steady pressure for about ten minutes at each treatment, unless the dilator passes sooner. When it passes, it should be withdrawn and reinserted several times until it enters easily. At the next treatment a larger size can be used. The treatments should be repeated once or twice a week according to the case and may be needed for from one to three months. A few cases need an occasional dilatation at long intervals for a year or two. The patient usually will come back of his own accord when it is necessary, because of the comfort the dilatation affords him.

Advocates of universal operation have raised three objections to the conservative method of treating piles; namely:

1. That the results are not permanent—that the sphincter soon contracts and becomes as tight as ever.

2. That the patient would prefer to have an operation and have the thing over with, rather than requiring treatment for months.

3. That operation gives the doctor a better fee.

In answer to the first objection, I would say that relapses are frequent even after the radical removal of piles by crushing or excision. I am now treating patients who were operated upon years ago, but, in whom the results were not permanent, and I find that they are willing to come for an occasional dilatation rather than undergo another operation.

When beginning the treatment of a case by the conservative method, I make sure that the patient understands that the course of treatment will not remove the necessity for watchfulness in the future, and that probably he will require a dilatation once or twice a year for a while.

The history of a typical case will best illustrate how little there is to the idea of relapse. Mr. A. B., age 28, sedentary occupation, came to me about ten years ago. He had been told that he must submit to an operation. He had one internal pile the size of a cherry, and several smaller ones. Occasionally, the large one would protrude and become very painful. I gave him two dilatations a week for three weeks, then, one a week for three weeks. By this time he was so much improved that I reduced the treatments to one a fortnight for about three months more. At the end of four months, his piles were reduced to insignificant tags of mucous membrane that gave no trouble whatever. After this, he came back of his own accord, at first about twice a year and later once a year, for the comfort, he stated, that a dilatation gave him in having a bowel movement. For the last three years he has been so well that he has not needed any treatment.

Mrs. O. S. age 35, stocky in build and very muscular, came to me about eight years ago. She had small but very painful piles, and the most obstinate sphincter that

I have ever seen. She complained that if her bowels were at all constipated it was almost impossible to evacuate them even with an enema. I found the sphincter so tight that I could not introduce the index finger until I had used the smallest dilator with steady pressure for fifteen minutes. I made so little progress with the conical dilators, that as soon as it was possible to introduce the two bladed rectal speculum I welcomed the powerful leverage of its long handles and thumbscrew. Progress was slow but satisfactory, giving some relief even at first. It took nearly six months to reach the point where I could pass the 33 millimeter dilator, which was the largest I attempted. For the first three years she returned every two or three months. For some time now she has had no trouble.

As to the second objection, that patients would rather have an operation and be done with it, my own observation is directly to the contrary. Most people dread the idea of operation. They have heard from friends that an operation for piles is followed by a good deal of pain for days. When they find that the conservative treatment does not involve operation, is not painful, and gives much relief even from the first, they are not worried at the idea of its requiring considerable time.

The third objection, that operation gives the doctor a better fee, is purely mercenary. The first consideration should be the patient's welfare, not, the doctor's pocket book. But, the objection is not even true. I have no difficulty in getting as good financial returns from the conservative plan as I would from operation. I say to the patient: "It will take a long time, and will cost you as much as the operation; but, it will give you as good or better value for your money, and you will feel the expense less, because it is spread over a considerable period." And, he is satisfied.

Fissura Ani

The pain of fissure is so agonizing that it will break down the fortitude of the most stolid. The condition is almost certain to become chronic from the same causes that produced it, namely, a tight sphincter and extreme constipation. The passage of a large and hard fecal bolus causes one or more little tears in the mucous membrane, which become inflamed from the pinch of the sphincter; and, the pain is so severe that the irritation of the daily evacuation soon becomes a constantly recurring horror to the patient.

The old treatment was, forcible dilatation under anesthesia, and incision through the base of the ulcer. This was usually successful, but, I get equally good results from the slow dilatation described above for piles, and there is no anesthetic, no operation, no lying in bed, and no detention from business. I usually apply to the ulcer, once a day for a few days, some stimulating antiseptic, such as tincture of iodine, or, a weak solution of carbolic acid or of silver nitrate.

Few things in minor surgery have given me such satisfactory results as this treatment of fissure.

Vagotonia: A War Disease*

By C. VON DZIEMBOWSKI SEN., Posen, Germany

Staff Surgeon at the Military Hospital, Posen, Germany.

[*Continued from August issue, page 557.*]

THE special symptoms, or symptoms proper, of vagotonia are related to the various vegetative organs—the heart, digestive tract, respiratory organs, uropoietic system, and so on; and these symptoms may be confined to merely one organ or several organs may be affected simultaneously; and, while mostly the attacks are periodical, not infrequently the condition is a chronic one. It may be stated that not every possible symptom observed, that was produced by increased vagus tonicity, will be enumerated; rather, I shall confine myself to those forms of vagotonia that have been thoroughly studied and which possess military value.

Vagotonic Heart Troubles

Bearing in mind the physiologic influence of the vagus upon the heart—that is, one of inhibition—it is clear that in cases of vagotonia we either must have a retarded or an intermittent action of the heart. And,

*Address delivered before the Society of Military Surgeons of Posen, as printed in the *Therapie der Gegenwart* for November, 1915. Free translation and adaptation by Adolph G. Vogeler, Chicago, Ill.

in fact, such patients will have attacks of bradycardia, which mostly occur while they are recumbent, but, may come on when they arise; or, also, the pulse may become intermittent. The patient being conscious of these conditions, they greatly contribute to his anxiety.

In cases of this kind, it is not always easy to diagnose vagotonia, under exclusion of organic cardiac lesion, although a conclusion is possible when all or many of the general symptoms are present, while no objective signs as to heart or circulation are decernible. Under certain circumstances, pilocarpine injections might clarify the situation, since that—because of this drug's stimulation of the vagus — would magnify any cardiac or other vagotonic conditions. However, a differential diagnosis can be arrived at, without this disagreeable experiment, by one of the following methods.

First, there is Erben's sign: when a vagotonic bends deeply forward, the pulse becomes much slowed. This result, though, is not uniform. Next, we may look for the irregular respiratory pulse, which very frequently is present in these patients. Here, the pulse is accelerated and grows smaller during inspiration, but is retarded and grows larger during the expiration. Of course, the patient must breathe very slowly and deep. Then, the Aschner sign, already referred to, may become excessively pronounced, and it may happen that pressure upon the bulbs of the cerebellar pons not merely slackens the pulse, but will cause vertigo, perspiration, and vomiting. Thus, the clinician should experience no great difficulty in distinguishing between vagotonic neuroses of the heart and organic troubles.

Vagotonia of the Digestive Apparatus

Every organ of the digestive system, which, next to the heart, is most often attacked, is subject to vagotonia, and in their case the symptoms depend upon an increased activity of the unstriated muscles of the tract and the secretory activity of the mucosa, in correspondence with the physiologic function of the pneumogastric nerve.

Beginning with the esophagus, we find this tube subject to spasmodic closure, so that stricture, naturally, is suspected. These spastic contractions may supervene suddenly and just as quickly pass away. This condition can readily be controlled with atropine.

In the stomach, the augmented activity of the vagus finds expression in spastic conditions and in secretory disturbances, with attendent consequences; the most common being cardiospasm, pyloric spasm, and hypersecretion of the gastric juice. A single dose of atropine (say, ½ milligram) often affords immediate relief in these cardiospasms—which are to be recognized by the differential methods outlined above.

Sometimes, however, a decision will be quite difficult. For instance, the patient complains of heartburn, pressure in the stomach and a sense of fulness, and the test breakfast demonstrates hyperacidity. Then, have we here vagotonic gastric hypersecretion or stomach ulcer? Before going further, we should test the gastric contents and feces for occult blood, examine the stomach radiologically for recesses, and get a very accurate anamnesis. Absence of the specific conditions and a history excluding former gastric disease would render ulcer improbable. Atropine could not decide here, since it also alleviates the symptoms of gastric ulcer. Under such circumstances, if there are no good reasons for diagnosing ulcer, while various signs of vagotonia are present, and particularly in conjunction with the blood-picture previously described, one should pronounce it vagotonic disorder.

As for pathologic conditions of the gut, we must bear in mind that, since increased tonus of the vagus stimulates the contractibility of intestinal musculature, there may arise a spastic condition, with consequent pain and obstipation—a true picture of spastic obstipation. However, the increased tonus also causes increased profuse secretion of mucus, and, so, it may happen that the obstipation alternates with diarrhea. Another effect of this intestinal vagotonia is the condition known as mucous colic.

The important point regarding these disorders is, the recognition that they owe their origin to an augmentation of the tonicity of the pneumogastric nerve, and that our sole therapeutic recourse, again, is atropine. Purgatives and opiates only can aggravate this condition. When in doubt, in a serious case, one might resort to taking a radiographic picture of the intestine filled with bismuth powder, which would bring to view the contracted areas.

Vagotonia of the Respiratory Organs

Taking up now the respiratory tract, we immediately think of bronchial asthma, and,

without going much into details regarding this amply understood disease, I want to emphasize that here we have the truest representative of vagotonia and the correctest picture of an independent vagus-neurosis. Likewise, in no other expression of vagotonia is the peculiar blood-picture so pronounced and sharply defined as here.

In this connection, I wish to emphasize that there are a great many gradations of asthma, and that these range from the simple bronchial catarrh to the most pronounced asthmatic seizure. For, many cases of bronchial catarrh really represent a true vagotonia, and result from undue secretion and spasm of the bronchi as a consequence of increased tonus of the vagus. Above all, the eosinophile bronchial catarrh belongs to this category—a discovery that came about as follows:

Three of my patients in the military hospital, while confined for other reasons, showed strong subjective difficulty in breathing that in no way was proportional to the objective symptoms of their mild bronchial catarrh. Examining their sputa, I found in them great numbers of eosinophile cells, and then their blood disclosed the true picture for vagotonia. A little atropine promptly dispelled all signs of bronchial catarrh and dyspnea.

Thus we see that there are bronchial catarrhs that may be regarded as the first stage of bronchial asthma and must be treated correspondingly. Their recognition is rendered possible through the signs (notably of the blood) described.

Vagotonia of the Uropoietic System

Finally, let us consider some of the vagotonic phenomena connected with the uropoietic organs. To begin with, it is not an easy matter to determine the symptoms resultant upon vagotonia, in view of the fact that so many various factors enter into the secretion and voiding of the urine, some of them under the control of the voluntary nerves.

Of late, one urinary disease—and this particularly concerns the military surgeon—has been referred to vagotonia, namely, the socalled cyclic, or orthostatic, albuminuria. As a matter of fact, this condition quite often is found in vagotonics; and the same characteristic blood-picture, the same general vagotonic phenomena are present in this form of albuminuria. Furthermore, since the investigations of von Dziembowski Jr., there at least no longer is any doubt that cyclic albuminuria is connected with a morbidly increased activity of the vagus nerve, as demonstrated by the influence of the hypophysial hormone upon the secretion and concentration of the urine. Especially this cyclic albuminuria is being explained by the effect of an anaphylactic shock produced by certain hormones upon the debilitated vegetative nervous system. This fact is well illustrated by the case of a youth who, presenting the stigmata of vagotonia, had an attack of scarlatina. Afterward, every time he was to return to school after vacation he became dejected and then albuminuria developed, without, however, any nephritic condition. A few days' course of atropine and bromide cured him. Of course, in arriving at such a diagnosis, renal and cardiac lesion must positively be eliminated.

[*To be continued.*]

Febrile Recurrent Headache With or Without Meningeal Involvement

By PROFESSOR GOUGEROT, Paris, France

THIS symptom-complex, which is incidentally referred to in medical literature, deserves to be defined in its individual characteristics and to become better known. It puzzles many physicians and raises difficult problems in etiology, prognosis, and treatment; for, it almost certainly constitutes a syndrome that may arise out of various causes and, thus, involve different prognostic indications.

In what follows, two condensed case-histories are presented, the first illustrating the syndrome in its mildest degree, the second, in its most intense severity. Between these

*Translated from the French, in *Paris Médical* for June 23, 1917.

two extremes all transitional degrees are observed.

The Case Histories

Case 1. M., 20 years old, had neither convulsions nor nervous affections during childhood, but attributes his present trouble to a fall from a horse, which happened July 27, 1915. (In other cases, there is no history of trauma.) He did not fall on the head, and lost consciousness for barely one minute. He felt some pain "in the kidneys," but had no "attack" of any kind. It was not until several weeks later that headache made its appearance, accompanied by fever. This headache recurred from time to time, and these attacks were diagnosed as "hysterical." Since then and during eight months of hospital observation, these phenomena returned, always being of the same type but varying in intensity.

The patient feels out of sorts several hours before the headache appears, and it rapidly becomes severe, involving the whole head, with or without throbbing or lancinating pains. Often there is dimness of vision, while vertigo is rare. The patient is exceedingly sensitive to noise and light. There are no convulsive movements; neither is there loss of consciousness, any urinary difficulty, albuminuria, or glycosuria. Vomiting is exceptional. The fever is constant, rising as high as 39.2° C. (102.6° F.) in the axilla, but, ordinarily goes no higher than 38.3 (101° F.) or 38.5 degrees, often remaining at 37.5 (99.5° F.) or 37.8 degrees (100° F.), while his normal temperature ranges between 36.2° (97.2° F.) and 36.8° C. (98.1° F.). The attack lasts rarely less than twenty-four hours, usually from thirty-six to forty-eight hours; sometimes, though, as long as three or four days. It occurs at irregular intervals which may be quite prolonged, but at times come close together; for instance, five were counted in February.

Neither during these attacks of headache nor during the intervals, any sign of nerve lesions can be discovered. Kernig's sign, which is observed in the most severe forms, is absent here. There is no stiffness in the neck, the patient holding himself stiff merely because his head aches. The tendon reflexes are marked, the skin reflex is normal. There are no disturbances of coordination. Romberg's sign is absent; the pupils are normal, visione and hearing likewise.

Lumbar puncture made on October 29, 1915, at the end of the attack of headache which had lasted twenty-four hours, gave the following results: Clear, colorless liquid. The maximum manometric pressure (Claude) was 47 Ccm. while the patient was sitting (Hypertension). Lymphocytes were one per cubic millimeter, using Nageotte's apparatus (Normal). Albumin, estimated according to Marcel Bloch, 0.70. (In excess.) Sugar was not present. There was, therefore, present a slight meningeal reaction.

The only peculiarity in this case was, that, on November 28, 1915, there appeared a zoster-like eruption over the left superficial cervical plexus, occurring after an attack of headache that had been unusually severe; and, on November 12, after the patient had been irritated (having been refused permission to go out) there was a period of loss of consciousness lasting several minutes, but no headache.

Case 2. D., 36 years of age. Personal and family-history negative; no hereditary taint. Eight months before, attacks of headache, without any known cause. Since then, these attacks recurred at irregular intervals and in variable intensity. In November of 1915, there were three mild and short attacks, similar to those in the former patient. In December, nine mild but consecutive attacks supervened. In January of 1916, there were seven severe and consecutive seizures, three of them lasting respectively, six, five, and eight days, four of shorter duration, two or three days and occurring in quick succession. In February, there was only one attack of six days' duration. These prolonged seizures are "slight meningitides" as indicated by the headache, vomiting that is not constant or frequent, usually constipation. Kernig's sign, and fever rising up to 38° to 39° C. (100.3° F. to 102.1° F.).

Between and during the attacks, the most searching examination fails to discover any sign of nerve lesion, except for the meningeal reaction of the phenomena themselves. Lumbar puncture made during the period of a severe seizure showed increased pressure. There was doubtful hyperleukocytosis (3 lymphocytes per Ccm. in Nageotte's apparatus). Slight, but undoubted, albuminuria was present, being 0.75 Gram. Sugar, absent.

All the transition stages, from the febrile headache, lasting one day, are observed, in

the same patient as well as in different patients.

What, then, is the significance of these recurrent febrile headaches? In our opinion, febrile headache is only a symptom. The question arises, therefore, whether it is infectious or of bacterial origin, or, whether it is toxic or, possibly, autotoxic.

The Origin of Headache

There are headaches which, undoubtedly, are symptomatic of some known infection, such as malaria and rheumatism; but, in other cases, no manifest infectious cause can be determined. Syphilis is absent, the Wassermann reaction being negative in the blood and the cerebrospinal fluid; the diagnostic treatment with mercury and iodine which I employed for months in several patients had no effect whatever. The resultless salicylic treatment eliminates marked monosymptomatic rheumatic infection. The negative results of quinine treatment, and examination of the blood eliminate marked malaria. Zoster infection, also can not be assumed, for, it is characteristic of true zona that it is not recurrent. The zosterlike eruptions occasionally seen during the decline of the febrile headache indicate an irritation of the nerve-roots by the unknown meningitic process and stand in the same relation to zona as do the scarlatiniform eruptions of true scarlatina. The seasonal infections, the socalled grip infections, have no clear relation to these headaches, two blood cultures made before the war were negative.

In exceptional cases, the febrile headache may indicate a tuberculous meningitis. Before the war, we saw a patient who had suffered with recurring febrile headaches for two years and who died, in the Laennec Clinic, of classical tuberculous meningitis, as proved at necropsy. (Poncet caused one of his pupils to write a doctor-thesis on the subject of tuberculous headache and "migraine".) But is every recurring febrile headache symptomatic of tuberculosis? We do not believe so. Nevertheless, the fact that this case terminated in fatal tuberculous meningitis warns us to be guarded in our prognosis.

In view of all this, we must admit our ignorance. However, we are familiar with other meningitic syndromes that almost certainly are infectious, the pathogenic agents of which, though, can not be determined. These are the meningitic syndromes in which the cerebrospinal liquid is puriform, aseptic, with intact polynuclears, and which have been described so well by Widal and Philibert.

The Probable Origin Is Infectious or Toxic

In one word, a large number of these cases of febrile headaches,certainly of the severe forms, give one the impression that they are of an infectious type; yet, it is not possible to ascertain the exact microbe causing them. One can not say that it is a question of a specific infection or of a syndrome due to diverse causes.

There are other recurrent febrile headaches, the syndrome of which conveys the impression of an autotoxemia. Autointoxication, whatever its cause, manifests itself upon the meninges and the brain. For known (history of migraine) or unknown reasons, the organisms select this place of defense; it is here that the toxic substances are destroyed, and burnt up, so to speak. The headache is the expression of the presence of the toxins and of the resisting efforts of the system to get rid of them; the fever is the sign of the combustion of these poisons. The patient destroys and burns up these poisons in his brain as he does others in the joints (rheumatism), still others in the skin (eczema), and so on. And, in fact, we have seen two alternating cases: one in which eczema alternated with asthma and in another with subacute "rheumatism." In these two cases, the syndrome of febrile headache was not that of true migraine.

It is a question of an ill-defined autointoxication, difficult to recognize. In two cases which we studied for a long time—the first one isolated, the other one alternating with subacute "rheumatism"—the blood contained neither uric acid nor urea; the urine was normal as to both. Consequently, the headache was not caused by gout, uremia or diabetes, the acute or subacute meningitic forms of which have been described.

Other Factors Excluded

Nor is it possible to charge it to hysteria. There have been described epileptic headaches asserted to be "equivalent" to convulsive seizures. This hypothesis, however, is not tenable in the case of those patients whom we have observed: they never showed definite symptoms of epilepsy or of an epileptoid nature. Nor is possible to suspect visceral, gastrointestinal, intestinal or hepatic troubles, these being absent in our cases.

We thus can understand how uncertain prognosis and treatment must be here, in view of the uncertainty of the etiology and pathogenesis.

The possible presence of tuberculosis, while very exceptional, calls for great reserve in the prognosis. Even aside from these unfavorable cases, it is serious; for these headaches render life very distressing.

Treatment is Empiric

The treatment remains uncertain. In those cases which give us the impression of being infectious, treatment ordinarily remains inefficacious: Mercury and iodine were employed, because of the possibility of syphilis existing; quinine and arsenic for a possible malaria; salicylates for possible rheumatism, etcetera. In one case, iodine seemed to cure a patient, although he was not syphilitic. In another one, injections of electrargol apparently were beneficial. Consequently, one is forced to resort most frequently to symptomatic treatment: aspirin and similar drugs, ice on the head, lumbar puncture when the blood pressure is known to be increased, which, though, is not a constant feature. The attempt must be made to place the patient into the best possible condition of resistance, by means of rest in the open air.

In those headaches that appear to have an autotoxic origin, treatment is more effective, and these are the only cases that we have actually seen relieved. For, in the infectious headaches, one never knows whether it is not a recurrent attack that is observed. The treatment is like that for autointoxication, for eczema, and for "chronic rheumatism"; namely: general, dietetic, hydropathic treatment, associated with suitable tonics.

Blood as Evidence of Gastric Ulcer

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[*Continued from October issue, page 713*]

Numerous Confusing Symptoms Considered

A rather unusual case was that of a boy of five who was a "sniper"—not in a military sense, but in that of eating cigarette stubs whenever he could reclaim them. During one attack of vomiting, he brought up what appeared to be tobacco-juice and rolls of fine-cut tobacco. Just to make sure, the material was examined, and it was found that the rolls were composed of mucus and epithelial débris, starch-cells, and the like, and that the color arose from the altered hemoglobin. This, therefore, was an "occult" hematemesis, but, from the subsequent course, judged to be owing to tobacco-gastritis, and not to ulcer.

A large mass of literature has accumulated since the days when duodenal ulcer was regarded as a rare disease, not susceptible of diagnosis, except by the occurrence of symptoms of gastric ulcer without hematemesis, but, with macroscopic blood in the stools. Whether it is so common as many authorities assert, and whether the diagnosis is so definite as is sometimes represented, the writer doubts. It may be confessed that it has not been found frequent, that insurmountable difficulties have sometimes prevented the use of the diagnostic methods proposed, and that fallacies have appeared when they have been used, so that the writer, while somewhat beyond the ignorance just mentioned, is far behind the majority of writers in ability to diagnose duodenal ulcer. However, it may be said that, when gastric ulcer bleeds freely, hematemesis is to be expected, while, on the other hand, whether there is hematemesis or not, blood will be found in the stools macroscopically. A duodenal ulcer, according to the amount of hemorrhage, must also show blood in the stools and may give rise to hematemesis; but, whether the latter symptom is common or rare, is not yet absolutely decided. One general fallacy should be pointed out: every practitioner of medicine, nurse, and mother knows that vomiting of bile is a frequent occurrence; yet, when it comes to the nice discrimination between the proximal and distal side of the pylorus, with regard to threads and spe-

cial tubes, in diagnosing between gastric and duodenal conditions, authorities assume that the pylorus is a watertight and almost germtight valve.

Ulcers and other lesions producing the hemorrhage from the intestine are diagnosed with considerable difficulty, in most instances; with great probability and accuracy of location under a few happy combinations of circumstances, until we reach the lower foot of the bowel that, granted a reasonable amount of skill and patience and the absence of certain anatomic obstacles, is accessible to view, through the speculum. Fortunately, so far as the differentiation of a source of bleeding is concerned, lesions of a hemorrhagic nature between the duodenum and the scope of the speculum are numerically small and, in the great majority of this small number, are suggested either by the existence of an infectious process, such as tuberculosis, syphilis, and dysentery, or by local indications of obstruction, acute or chronic forms of peritonitis, and so on.

The Nature of Gastric Bleeding

Thus, in the majority of cases of alimentary bleeding, it is (1) fairly easy to exclude sources in the mouth, throat, nose, and esophagus, and (2) sources intermediate between the duodenum and the reach of the speculum; so that the real difficulties of diagnosis are (1) to distinguish between gastric ulcer in the more or less limited type and other gastric lesions, (2) to distinguish between gastric and duodenal ulcer, and (3) to diagnose for or against gastric ulcer in the presence of complicating sources of bleeding.

The principal differentiations to make as to the nature of gastric bleeding are: peptic ulcer, ulcer due to organic vascular lesions producing necrosis, gastric menstruation (rare, and denied by many), back-pressure hemorrhage from portal obstruction (mainly of the nature of hepatic sclerosis), more or less acute gastritis, that form of chronic gastritis, with or without portal obstruction, in which it is desired to differentiate "erosions," traumatic bleeding from the suction of the stomach tube, sharp foreign body or food ingredients strictly foreign but not usually so called, rupture from straining, and we may also include accumulations of blood in the stomach, swallowed or entering from below the pylorus or through an unnatural communication of some kind. Without entering into a detailed consideration, it may be optimistically stated that there is quite a large group of cases in which the diagnosis may be made with relative certainty, and pessimistically, that there are many cases in which the exact diagnosis is very difficult if not impossible. Indeed, there are cases as has been mentioned, in which even at necropsy it is impossible to review the clinical diagnosis and state positively what happened at the time of the supposed acute attack of ulcer.

Difficulties of Differential Diagnosis

The diagnosis between gastric and duodenal ulcer is, admittedly, difficult and one, such as the writer, who finds duodenal ulcer rarely and with the utmost difficulty, must admit that if this is a common condition, the error in diagnosing gastric ulcer is extremely large.

The diagnosis for or against intermediate intestinal sources of bleeding is easy in many cases, while in others, probably very few, it is virtually impossible. Diagnosis of bleeding within reach of the speculum is easy, as a rule, although it may not be possible to make an exact diagnosis of the nature of the condition; when such a diagnosis has been made, however, it becomes doubly hard to determine for or against the presence of gastric ulcer, inasmuch as we already have a determined source of blood and must judge also as to whether blood comes from above.

It sometimes is taught that the nature of a source of alimentary hemorrhage may be judged by the state of the blood, arterial or venous, copious or slight, clotted or fluid, fresh or changed, macroscopic or occult; also by accompanying cellular and chemic findings. In some cases, such appearances are conspicuous and convincing; in others, they are misleading. For example: dark, grumous blood, small in amount, typic of the description of bleeding cancer, and in a person of cancer-age, may occur. Lavage with hydrogen peroxide, etc., may check the hemorrhage and the person may live on for many years, so that we may exclude cancer. It is particularly difficult to differentiate between peptic ulcer without fulminant hemorrhage and that owing to necrosis from vascular lesions in a person of middle life, and between the latter type and ulcerating can-

cer, in many cases. Occult blood in the feces may come from as low as ten inches above the anus. At least, the writer has witnessed its cessation after local applications, through the speculum, to small ulcers. Given even so patent a source of blood as external piles, it may be "occult" if the feces are liquid and have accidentally been shaken on the way to the laboratory.

The idea that accompanying microscopic and chemic findings locate the source of a hemorrhage is based on the assumption that these findings originate with and accompany the blood from source to observer; which, obviously, is not true. For example, ciliated epithelium may be found with blood vomited from a gastric ulcer. With repeated retching, bile almost regularly enters the stomach and is added to blood of the same or any other suprapyloric source; while, conversely, hydrochloric acid from the stomach may be brought up with duodenal contents. Without denying that an expert histologist might definitely diagnose cancer from a single specimen, it must be recognized that an ulcerating cancer is likely to yield cell-masses more or less altered; and the writer confesses that he never has found such a mass on which he was able to base such a differential diagnosis, although, from the examination of several slides, he has several times made this diagnosis with a reasonable degree of probability and had it confirmed. On the other hand, he has known of the diagnosis of cancer having been made from a scraping of gastric mucosa removed by the suction of the tube, although the cellular structure appeared perfectly normal.

As to the Term "Occult Blood"

It is well to emphasize that the term "occult," as relating to blood in the alimentary contents, has no technical significance. A very small amount of blood, obtained comparatively fresh, in nearly colorless or white stomach contents, may be obvious to the naked eye, while, according to color of material, opportunity for darkening of blood from physiologic or accidental delay in obtaining the specimen, opacity of material examined, and such, quite a large mixture of blood may be occult. In general, a much larger amount of blood may be occult in feces than in chyme. A particularly important point is, not to neglect to suspect the presence of blood simply because the color of the material examined may be otherwise explained. For example: it is especially important to make the chemic test for blood in vomitus after the patient has eaten currant-jelly or drunk grape-juice, and in feces after the patient has eaten huckleberries or has been given bismuth. It is said that watermelon imitates the hemoglobin test; however, further investigation of this statement is desirable.

As has been stated, blood may be occult, at least after liquid feces have been thoroughly mixed and their examination delayed, even though the source of hemorrhage is as low as the anus. It is a question as to how much blood must be present in stomach contents and feces before it becomes macroscopically apparent. One authority has stated, though not in so many words, that 10 percent or more of blood may be occult in feces. It is also worth while to emphasize the prognostic point that 100 percent of blood in a discharge from the bowel of the normal daily maximum is not serious in itself, if not continued, and that even the maximum stomachful of blood does not represent exsanguination. It is not intended to minimize the importance of alimentary hemorrhage, but, merely to counteract the lay, and to some degree professional, exaggeration of the danger from the direct loss of blood.

Relative Delicacy of Hemoglobin-Test

The delicacy of a hemoglobin test has an important practical bearing. For example: A test capable of reacting to 1 part in 100,000, requiring a virginal test tube, which must not even contain, in advance, a drop of water, corresponds to the addition, from some accidental scratch or derived from meat, of a drop of blood for a month and detectable in each day's passage. Of course, as we do not actually apply the test to the whole day's passage, the law of chance comes into play, so that this is an overstatement.

As ordinarily applied, 25 Grams of feces is thoroughly mixed with water—or, if the feces are already liquid, the opportunities for mixture and distribution of hemoglobin have already been presented. In practice, 1 to 2 mils of the mixture is actually tested, and, if 1 drop of blood is present in 25 mils of feces, we have just about a proportion of 1 : 1000 for liquid

feces, and 1 : 2000 for formed feces rubbed up with equal amounts of water. Thus, even a test of this delicacy is, from the clinical standpoint, rather too stringent.

The writer has employed benzidin, aloin, guaiac, and phenolphthalein tests, variously modified. In case of dark feces or if small amounts of hemoglobin are present, extraction may be made with gasolin, to accentuate the test. While much has been written as to the confusion of blood from meat in the diet, the fact remains that feces taken at random and without restriction of diet very rarely show blood if the tests are applied in the ordinary crude way, while they do show blood if a drop or two is intentionally added to the same negative specimens, not to mention the positive results spontaneously obtained in enough cases to convince one of the reliability of the tests. It would appear that the hemoglobin-test might be applied with some modifications to check the digestion and absorption of meat, but, the writer has not, thus far, been able to carry out this idea and it is, therefore, suggested to more expert observers. Barring certain cases of gross failure of digestion or the use of large quantities of imperfectly cooked meat, the writer does not recall any case of distinct reaction to a hemoglobin-test in feces in which restriction of diet has made any difference in the result, with allowance, of course, for intermittent, but genuine, hemorrhage.

This is, of course, somewhat contradictory to the statements as to the presence of a variety of oxidases in the alimentary contents. With the intention of eliminating these factors, many tests have been made after boiling the feces or stomach contents; but, it has not appeared that (remembering that only crude methods of testing are here considered) positive reactions have been changed to negative. On the contrary, if one is not careful to cool the material before applying the hemoglobin-test, the blue tint of guaiac, which is liable to develop on standing, may occur so promptly as to lead to the diagnosis of blood.

A Routine Procedure

As a practical routine, the writer has adopted the following: Test 1 mil of liquid or semiliquid feces or the same amount of formed feces rubbed up with water—excluding obvious indigestible residue and taking pains to get a fair sample or to select any particularly suspicious portion. Check with the phenolphthalein reagent and with fresh tincture of the clear gummy portion of a lump of guaiac, adding an equal amount of hydrogen peroxide. The writer is a little suspicious of the phenolphthalein reagent, although the results almost always agree with those with guaiac or with those with aloin and benzidin. The phenolphthalein reaction is usually inhibited if the feces are acidulated; on the other hand, if they are rendered alkaline, enough unchanged phenolphthalein may be present to give a confusing tint. Read the tests within one or two minutes, cold, and do not pay any attention to delayed reactions or to indistinct tints. In doubtful and conflicting reactions, impose a meat-free diet, and follow the directions for more delicate tests, as regards fresh test tubes, destruction of oxidases, and so on. In some samples, the guaiac test, mercuric-chloride test for hydrobilirubin, and the sodium nitrite-sulphuric acid test for indol will all give the same marked green color, indicating unchanged bile pigment, which can also be demonstrated in the filtrate of a watery extract. How to eliminate this interfering reaction, the writer does not know, but, it should discount the intended tests.

While in fulminant ulcer chemic tests are scarcely necessary to determine blood, the great majority of cases in which gastric or other alimentary ulcers and other sources of hemorrhage are more or less suggested do require chemic tests, frequently repeated. This is especially true of the type of gastric ulcer due to organic vascular lesions and occurring mainly in elderly patients or those with syphilis or otherwise showing evidence of arteriosclerosis, liability to embolism, etcetera. In this type, hematemesis is not usual and the bleeding is commonly slight. In the great majority of fecal examinations pursued more or less as a routine, hemorrhage can be excluded, even without restriction of diet. If blood is found, it is well to restrict the diet and to examine for high and low sources and then to enter more carefully into the differential diagnosis. If blood is not found, it is necessary, whenever any suspicious symptoms or signs are present, to reexamine frequently.

It may be pardonable to mention the coincidence that during the writing of the last part of this article the son of the patient mentioned as having shown probable back-pressure hemorrhage, laryngeal tuberculosis, and, at necropsy, gastric cancer, has appeared, afflicted with an acute gastric ulcer, of the peptic type, and with hematemesis of moderate amount. He has epigastric pain and tenderness on pressure, but, not the dorsal tenderness that has been mentioned as almost pathognomonic. The matter of heredity is suggested; still, there probably is no true heredity in this instance; and, indeed, except in indirect ways and as applying to angiosclerotic ulcer, back-pressure hemorrhage, and the like, heredity does not seem to be an appreciable factor.

What the General Practitioner Can Do in the Treatment of Chronic Diseases

Therapy of Diseases of the Heart

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The Medicaments Employed

[*Continued from July issue, page 492.*]

OF the medicaments in the treatment of cardiac disorders, the most important by far is digitalis, preferably in the form of the fluid extract and in doses of 0.05 to 0.1 Gram. The fluid extract does not differ materially in composition from the tincture, but, is more acceptable because of the smaller bulk of the doses. As all digitalis preparations deteriorate with age, care must be taken to secure as fresh a supply as possible.

The proper preparation and dosage being used, it will be found, as a rule, that remarkable results will follow in from forty-eight to seventy-two hours. Diuresis sets in, the dyspnea disappears, along with the cyanosis, cardiac asthma, venous statis, the bronchitis, the dropsy, and the enlarged liver. In short, the patient seems and feels as if he were infused with new life. If these beneficent effects do not appear at a first trial, then another or even a third preparation should be tried before coming to the conclusion that digitalis is useless in that case; time for the symptoms of the preceding preparation to be allowed to pass off, of course.

However, digitalis is indicated in all cases of chronic myocardial insufficiency, with the exception of those in which its effects upon the heart may produce injurious results upon remote organs. Also, there are persons who have a special idiosyncrasy against digitalis, even small doses affecting them unpleasantly, and here the substitutes for digitalis should be given a trial. In all cases of myocardial insufficiency, though, in which the physiological effects can not be expected to prove adverse, digitalis is indicated. In this disease, the best substitute for digitalis probably is strophanthus.

The physiological effects of strophanthus are much the same as those of digitalis, when given in medicinal doses. In toxic doses, the vagus is not irritated by this drug as it is by digitalis, and its vasomotor effects are less pronounced, while it exerts a direct diuretic influence upon the kidneys. When digitalis fails, though, it is useless, in most instances, to try strophanthus. It is useful as a means of continuing in a milder way the completed digitalis-treatment and also is valuable as a cardiac tonic. I give preference to Merck's tincture of strophanthus, beginning with 5 drops three or four times a day and increasing to 10 drops.

Squill also has the same clinical effects as digitalis, but, is rarely employed as a substitute, owing to its effects upon the gastrointestinal tract, in giving rise to vomiting and diarrhea; nevertheless, it may be combined with digitalis for its diuretic effects in dropsy.

Although many other drugs have been recommended as substitutes for digitalis, such as the fluid extract of convallaria majalis, cactus grandiflorus, helleborein,

adonis vernalis, and so forth, not one of them ever can take the place of digitalis, nor probably that of strophanthus, and they are to be prescribed only when for any reason neither digitalis nor strophanthus can be given.

Vasomotor Remedies

The most important of the vasomotor remedies are caffeine and theobromine in their various forms of preparations, both of which exercise a peculiar effect upon the heart, improving the nutrition of the heart-muscle by increasing the circulation in the coronary arteries.

Theobromine is decidedly valuable in fat-heart. Caffeine has an effect upon the vasomotor center, where it produces contraction of the small arteries, and, therefore, should be administered whenever a distinct vasodilatation is required, plus the increased systolic contractions arising from increased nutrition of the heart-muscle. The action of caffeine, upon the heart, as a true cardiac tonic is considerably more rapid than that of digitalis. Caffeine should be used in the form of one of the double salts, either the caffeine-sodium salicylate or the caffeine-sodium benzoate, because of their greater solubility. They may be administered internally or hypodermically.

Caffeine may be used in chronic myocardial insufficiency (especially when there is influenza) on the basis of a chronic myocarditis or a chronic valvular lesion, in order to carry the patient through until other measures can be taken. It should not be used for any great length of time, because of the nausea, vomiting, vertigo or psychic irritation liable to be produced by it.

Although camphor relieves the circulation by producing dilatation of the peripheral blood-vessels, while it stimulates the cerebrum and respiratory center, and, combined with ether, forms one of the most valuable stimulants in acute cardiac weakness, no permanent effects are to be expected from it. Alcohol, however, is an extremely important remedy in all affections of the heart. In small doses, alcohol is especially valuable in those conditions of the heart due to infection, while in any of the cardiac disorders of elderly persons, such as senile heart, it is indispensable; also in all heart affections of alcoholics. Its action is that of a stimulant, producing dilatation of the blood-vessels, although as to whether it has a direct beneficial effect upon the heart has not been satisfactorily determined. Its true place is that of a stimulant in an emergency, and then it should not be continued for long.

Valerian is valuable in acute exacerbations of chronic myocardial insufficiency and in neuroses. It acts indirectly by producing reduction of the blood pressure and frequency of the heart-beats.

Vasodilatation

The most powerful of the vasodilator remedies are the nitrites—amyl nitrite, nitroglycerin, and sodium nitrite. Acting indirectly upon the heart, these are of especial value in angina pectoris and arteriosclerosis, and often are given to counteract the vasoconstrictor effects of digitalis. In cerebral arteriosclerosis or hemorrhage, however, the nitrites should be prescribed with great care, if at all, inasmuch as they produce overfilling of the blood-vessels, especially of the head and neck. Likewise, whenever there is low blood pressure, they are contraindicated, as they may bring on syncope.

The most important of this group of nitrites is nitroglycerin. This acts in several ways, namely, partly as nitroglycerin molecule, and partly on account of its being split up into glycerin, nitrites, and nitrates when in contact with an alkaline medicine. A rapid effect is produced in the former instance, but, there also are disagreeable symptoms because of its action on the cerebral circulation. The second method produces the prolonged effects of sodium nitrite, with less intensity. The best form in which to use nitroglycerin is that of an alcoholic solution, although either the tablet or pill is valuable, according to the conditions.

Amyl nitrite is of use only in giving relief in attacks of angina pectoris, its effects not lasting longer than a half-hour, though they are almost instantaneous in appearing.

Sodium nitrite may sometimes be found of use in arteriosclerosis and also between the attacks of angina pectoris when nitroglycerin fails; however, it is frequently objectionable to the patient, because, being decomposed by the gastric juices, it produces eructations and derangement of the stomach.

Spirit of nitrous ether (the antiquated term "sweet spirit of niter" should be dis-

carded!) is a good cardiac stimulant, the employment of which will sometimes prevent an attack of angina pectoris.

When the right heart is overfilled, venesection will afford a respite, and this may be performed with life-saving effects.

The Physical Treatment

Carbonic-Acid-Gas Baths.—The effects produced by these baths are the result of irritation of the sensory nerves of the skin, which is followed by increased blood pressure and a decided slowing of the pulse, so that the distribution of blood is altered, the skin and muscles receiving more of it, and the splanchnic circulation also is increased. The heart is relieved, dilatations disappear, contractions are increased in force and the nutrition of the myocardium is improved. The administration of these baths requires skill, practice, and special preparations, so that the patient, whenever possible, should be treated in some institution rather than at home, both on account of the disturbance which the method creates in the household and the fact that the patient rarely gives himself up so completely to the heart treatment at home. The duration of the course of treatment varies from four weeks to eight, the number of baths depending upon the requirements of the individual patient as observed by the attending physician. The indication for the employment of the baths is, chronic myocardial insufficiency of the first degree, whatever the cause or condi- proper heads.

Exercise.—Gymnastics, which may be active or passive, or both combined, act equally upon the peripheral circulation and the heart. The passive methods are of especial value in the convalescent form of acute cardiac diseases and also in exacerbations of chronic forms. They can be applied with more accuracy than the active methods; which latter should be employed only in the mild form of myocardial insufficiency, if it is of the first degree, being harmful after the heart strain, but, useful after the heart reacts normally to exercise, especially in the fat-heart of strong or young persons. The exact procedure in these methods will be found under their proper heads.

The Schott Method.— The exercises adopted by August Schott, at Nauheim, in conjunction with the baths or alternatingly, are of unquestioned benefit. Such a course can be given in any well-equipped sanitarium, such as we have in the United States; it is not necessary to go to Europe for these treatments. The treatment can best be given, however, in an institution, being much more efficacious and permanent than by any treatment and regimen given at home.

Diet.—In all cases of myocardial insufficiency, there is more or less disturbance of the gastrointestinal tract, so that the diet should be prescribed with this fact in view, as well as the main fact that the object of feeding here is to keep the patient in such a good condition generally that not too much work is put upon the heart.

High living being a common cause of the disease, the first thing to be done in very many cases is, to reduce the quantity of food taken at each meal, after which those items of the menus that may have produced the trouble in the gastrointestinal tract may be withdrawn. The use of alcohol should be limited. The food should be given in small quantities, five or six times a day, instead of only three times in larger amounts, and should consist of easily digested articles—albumins, fats, carbohydrates. The bowels should be kept in a normal condition. In the severe forms, the use of tobacco should be absolutely prohibited, while whatever may generate carbonic-acid gas in the stomach such as carbonated waters and effervescent powders, should be avoided. No patient should be underfed, and in the case of fat patients great care must be taken to choose a diet that is not depleting. In the mild cases, the diet is regulated chiefly with reference to the quantity and quality of food.

Hygiene.—Rest, both physical and psychical, is most important in all cases of myocardial insufficiency. There should be no excitement, such as attends gambling, brokering, horse-racing, and so forth. In the care of these patients, sudden death often accompanies or follows the sexual act. In the winter season, a warm climate is desirable, while in the severe forms it is always best, though extreme heat is harmful. An altitude exceeding 2500 feet is inadvisable.

The Treatment of Symptoms

Although, if the patient is neurotic, pain or fluttering of the heart may run into a form of neurasthenia, with which persons the bromides are valuable, as a rule, these

symptoms require no more attention from the physician than an explanation as to their harmlessness. Still, there are cases in which cold applied to the heart may be useful, or, also, sinapisms, liniments, ointments, and so forth.

The prevention of attacks of angina pectoris is very important, as is also the treatment of flatulency and constipation. Cathartics that necessitate straining should be avoided. Tobacco is absolutely contraindicated, and alcohol should not be used if it can be avoided. The diet is the same as that in chronic myocardial insufficiency. In the severe forms of angina pectoris, all unnecessary movements must be avoided, while in the mild forms only the simplest physical exercises are permissible, and all worry, excitement or psychic disturbances are to be avoided. There should be no sexual indulgence. Change of scene, of business or profession is desirable. Nitroglycerin is the best preventive of the attack in cases where the patient is warned of its imminence; whisky, Hoffman's anodyne, and aromatic spirit of ammonia likewise are useful for this purpose.

Treatment of Angina Pectoris.—The patient should be kept in bed during the continuance of the attack. If the pain and constriction are not amenable to sinapisms, the hot-water-bag, and poultices, then morphine should be administered hypodermically. There are objections to the use of morphine here, but, when given in proper doses, neither too large nor too often, it has little or no bad effect on the heart. Morphine may also be employed in angina pectoris connected with contracted kidney; never, however, here as in all other cases, unless the attack is very severe. The best remedies to employ during the attack are the nitrites (*q. v.*). If there is syncope, it should be treated the same as acute myocardial insufficiency. When the angina is a result of myocardial weakness, and only then, should digitalis be given. Physical measures may be employed in the interval between the attacks, except in the severe cases, when physical measures, except, perhaps, slight massage, are dangerous.

Iodides and nitrites compose the medicinal treatment of angina pectoris. Nitroglycerin is given at first in the minimum dose of 1-2 mg. (1-128 grain) three or four times a day. This dose may be increased as the patient becomes accustomed to the drug; the indication for its increase being found in the effect produced. The alkali iodides are given in doses of 15 to 20 grains a day, until there are evidences of iodism in the patient, when the remedy is stopped, to be continued, though, when these symptoms are gone. The combination of nitrites and iodides as a routine method is excellent practice; still, there are patients who fail to respond, either because they will not take the trouble to carry out the physician's instructions regarding medication, diet, rest, and exercise, or, because the remedy is not suited to the individuality. In the latter instance, cardiotonic medication, including diuretin, will, probably, be found indicated.

[*To be continued*]

An Old Doctor's Life Story

An Autobiography

By ROBERT GRAY, M. D., Pichucalco, Mexico

[*Continued from October issue, page 740*]

NOW that we know all this—which, though, it was impossible to conjecture under the sway of Huerta—it is not difficult to understand and appreciate the inevitable triumph of the rebel cause, that once seemed hopelessly doomed: as it stands now, but little prophetic guessing is required to perceive that the dictatorial rule of the past has vanished forever in Mexico. There are intrepid daring spirits enough to foment and lead; yet, they have the intelligence to realize that such attempt would be hopelessly forlorn, without sufficient following to put a respectable revolution on foot; and they are not so zealous as to become martyrs in futile opposition to triumphant masters.

When all the revolutionary leaders of this district refused to join Huerta to combat the Americans, the federal government opened an office here to enroll volunteers, and the people were so vindictive against the Americans that it seemed that the last man would eagerly enlist. Not a single one volunteered. It would be wild guessing to

say what word was whispered from rebel refuges down the line of the private citizen that cooled the enthusiasm to rush to arms against the northern invaders. A special collection as an urgent defense fund was ordered, a special notice being sent to each resident naming and calling for his particular contribution, to me with the others; but, not one in ten paid, while many took up arms on the rebel side. I answered that I should not pay a penny, because I had rendered the government ample gratuitous service.

Now that the federals are gone, Carranza is disarming native or local rebels hereabouts and sending them home to attend to their private business.

It may be rationally deduced from all this that we are practically out of the woods here as to revolutions. And, with the predominating advantages Carranza has everywhere, in case that Zapata has accepted the situation (which, it seems it would be folly for him to contest), there should be almost positive certainty that there will be no more civil war in Mexico, unless Carranza turns out a disappointing failure. This, however, it would be madness to anticipate, when one contemplates his past achievements.

There now are flattering probabilities that there will develop amicable relations with the United States, such as a generation's time would not have sufficed to establish had the federals under Huerta been victorious or the Americans had undertaken an extensive armed intervention. Now, Huerta is being blamed for the occupation of Vera Cruz.

Once Upon a Midnight Dreary

I have occupied this space with the outlines of burning internal issues and developments, believing that such would be interesting and welcome to any reader who may have had the patience to reach these closing pages.

I sincerely wish that I could end this rambling narrative with the shadows of uncertainty entirely cleared away from the long-suffering commonweal realmed under this generous southern sun, dark shadows that still gloom round about me this lonely night. But, tomorrow night and the nights that are to follow my weird loneliness must be doubly lone, with this saddening companionship so protractedly drawn through multiple retrospections at an end.

Due to the peril of hostile menace to people abroad in the darkness, no call of human distress has broken in upon my absorbing reveries at any night during the past six months, save, now and then, for some stray wounded combatant, until even this obnoxious task, with all its painful recollections filtering from the delicate chambers of memory, grew to be a very dreary surcease from the goading string of sheer monotony. Oft I have yearned with longing fondness to hear but the faint whisperings of an English tongue, only to hear through the silent night the challenge of the sentinels, "Quién viva?" with the eternal "Viva Carranza!" or "Viva Huerta!" as the case might be. Yes, I have read aloud in English to myself till, weary of the sameness of my own voice, impatiently putting away the book.

You have seen my exuberant young life, with its cheering promise and inordinate expectations, looming softly brilliant upon the dazzling horizon of hope, rendered perverse and truantly rebellious by the most sacred tyranny that ever warped and blighted naturally inherent generosity, leading on and on, till the very wells of my heart became sapped and empty by the dire pumping of dry sorrow. On the other hand, you have seen the impulse to heroic, if misguided, struggle against that unsparing destiny, till the tragedy of this graphic pilgrimage intervened in the Queen City of the South. And then—and then—you have seen the remorseless pursuit of the phantom specter ever driving and enthralling me deeper in the shambles of the marshes and the jungles.

But, dear friends, you have not seen, save possibly by inference, the subtle guidance of a guardian-angel softly leading me back—the same kindly messenger whose shadowy wing hovered over my lonely head amid the haunts of multiplied perils to mortal life, when my vainly selfish longing was, that I might lapse heroically into the restful tranquillity of painless sleep—yes, gently conducting me back to the limpid innocence of my intense tender years and their immaculate fountain of tears. And do not think, should this final page of the story of my tragic wreckage of such life as you all live be moist with the dew of parting sorrow, that it all was but the feeble drivelings of dotage.

[*To be continued*]

What Others are Doing

THE DISINFECTION OF DRINKING WATER

The sterilizing of contaminated drinking-water is a problem of special importance in times of war. Bleaching powders or similar hypochlorite or other chlorine preparations have been used with the greatest success for the sterilization of relatively large volumes of water. The use of water-carts containing water treated with a carefully regulated quantity of bleaching powder has given every satisfaction when the method could be properly carried out, as, for example, when troops are practically stationary. The sterilizing of small individual quantities of water, such as are needed by cavalry or rapidly moving troops, is a much more difficult problem, and one that up to the present has not been perfectly solved. The use of hypochlorites for this purpose involves some difficulty, owing to the instability of small tablets containing the minute quantity of active disinfectant required. In their place, the bisulphates of the alkali metals have been extensively used in tablet form, but the superior potency of many chlorine compounds would indicate that a stable potable chlorine disinfectant suitable for the sterilization of small quantities of water is desirable.

With this end in view, H. J. Dakin and E. K. Dunham (*Amer. Jour. Med. Sci.*, Aug., 1917) have conducted a number of experiments with various types of substances, one of which they believe to be worth practical application.

Without entering into the details of these experiments, of which cognizance may be taken by consulting the original article, it may be said that, the authors consider, the substance most suitable for the purpose is p-sulphonedichloraminobenzoic acid ($Cl_2N.O_2S.C_6H_4.COOH$. It is easily prepared from cheap, readily available materials, and appears to be effective and reasonably stable. The presence of the COOH group confers a slightly greater degree of solubility in water, which is further increased by dispensing it with alkaline salts, such as sodium carbonate or bicarbonate, borax or sodium phosphate.

Since the systematic name of this disinfectant is inconveniently long for ordinary use, the authors have coined for the tablets containing it the commercial name halazone —a term that conveys some indication of the character of the compound.

In the bacteriologic tests made with this substance, five to ten standard drops of the treated water generally were used for plating on agar and counting the surviving organisms. Suitable control tests were invariably carried out.

From the results obtained by the authors, it appears that a concentration of 1 : 300,000 is sufficient to sterilize an ordinarily heavily contaminated water in about thirty minutes, and such a concentration could be relied upon to remove coli, typhoid, and cholera organisms. Special experiments showed that the substance in tablet form is efficacious when acting upon water contained in aluminum bottles, although a very trifling action on the metal may be observed if tablets are allowed to remain undisturbed in long contact with the metal; however, the authors believe such action to be of no practical moment. In the concentration of the solution as given, the taste of the disinfectant is just perceptible, especially in warm water containing but little organic matter; still, the water is perfectly palatable.

The point of advantage of the present disinfectant over most hypochlorite preparations is the fact that the active chlorine is less rapidly used up, so that the process of disinfection continues for a longer period.

Referring to the original communication for information relative to preparations of p-sulphonedichloraminobenzoic acid, it may be said, further, that the authors have observed no very marked difference in the behavior of the substance when made into a tablet with salt and either the carbonate or bicarbonate of sodium, dry or crystal-

lized borax or sodium phosphate, although the crystallized or hygroscopic salts are undesirable if the tablets are exposed to high temperatures. Tablets prepared in the manner found most suitable by the authors contained about 4 milligrams of the disinfectants and are suitable for the sterilization of one liter (or one quart) of moderately heavily contaminated water. In the case of extreme contamination, a second tablet may have to be added.

It stands to reason that the practical success of the disinfection proposed by the authors will depend very largely upon the stability of the tablet. While at present sufficient time has not elapsed for entirely convincing experiments, it appears, from a very few months' observation, that the stability of these tablets is sufficient to insure their practical utility. They certainly are more stable than other similar compounds at present known. When kept in amber bottles under ordinary conditions, no decomposition was detectable in two months. When exposed to bright sunlight in clear glass tubes, decomposition was more marked; and the same was true of the crystallized borax tablet at a temperature of 38° C. The dried-borax and sodium-carbonate preparations were stable under these conditions, but, those with bicarbonate less so. On the whole, the dry-borax or dry-sodium-carbonate tablets appear preferable.

HALAZONE FOR STERILIZING WATER

In *The British Medical Journal* for August 11, last, we find the report of the British Medical-Research Committee upon halazone tablets. These tablets, which were of British manufacture, we are informed, are now being very extensively used in the British army and navy. The report follows:

Weight of Tablets.—From Dakin and Dunham's article, it appears that the tablets are intended to weigh approximately 0.1 Gram each. The weight of tablets from three lots was found to vary; the weight of tablets from lot K was 0.075 Gram each, from lot M, 0.098 Gram, and from lot N, 0.104 Gram. The variation in the weight of the tablets is an error which should be corrected.

Solubility.—One or two tablets in 38 ounces of water contained in an aluminum water-bottle, carried by a marching soldier, were always found completely dissolved within ten minutes; with an enameled water-bottle holding 40 ounces of water, complete solution required twelve minutes.

Taste.—Taste-experiments were conducted with tap-water, only. One tablet to a quart was not detected by anyone of three observers. Two tablets to a quart were detected as taste by two observers, and as taste and small by the third. In respect to taste, halazone seems to be identical with chlorine from other sources, and with certain waters would, no doubt, form chlorine compounds having an objectionable taste.

Keeping-Qualities.—Tablets kept in a bottle under ordinary laboratory conditions were tested at the end of six weeks and were found quite as effective as usual in sterilizing various types of water, the ordinary doses being used.

Mode of Action.—Water treated with this compound gives the ordinary starch-iodide test for free chlorine, and the efficiency of the sterilization may be forecasted from the amount of free chlorine remaining after thirty minutes' exposure, as judged by the depth of blue color with starch and iodide. Ordinary tap-water treated with a double dose smells and tastes of chlorine. Hydrogen sulphide and organic matter interfere with sterilization by halazone as by chlorine from bleaching powder.

In reference to this report, Captain Fred Adams says: "It was found that one tablet of halazone per quart is sufficient to render safe a clear water of low organic content. Two tablets per quart will, in most cases, render safe any water likely to be consumed. Hardness does not appear to interfere with the sterilizing action." In conclusion, he says: "The tablets are readily soluble, and do not lose strength rapidly."

Halazone tablets have been placed upon the market in the United States by The Abbott Laboratories. It is believed that they will be very extensively used in this country, not only in military service, but, also wherever there is a question as to the safety of the water supplied. Eventually, we believe, farmers, travelers, and the larger industrial establishments will depend upon these tablets for the prevention of water-borne diseases.

DICHLORAMINE-T FOR NOSE AND WOUNDS

In a paper published in *The British Medical Journal* for June 30 (p. 865), Doctors Dakin and Dunham described experiments with oily solutions of dichloraloramine-T (toluene-para-sulphondichlora- and recommended its use particularly for

the disinfection of the nasopharynx in carriers. The same journal, in an editorial in its issue for August 25, says that dichloramine-T, though very sparingly soluble in liquid paraffin-oil, is quite readily dissolved in eucalyptol and that the resulting solution then can be diluted with liquid paraffin. In this way, a bland oily solution containing 2 percent of dichloramine and suitable for application to the throat can be obtained.

The authors directed that the nose first be cleansed with salt solution or with a 0.25-percent aqueous chlorazene solution, either by spraying several times, using the handkerchief between applications, or by irrigation. The oily solution is not in itself as efficient in removing inspissated secretion as are watery solutions. They advise, also, the use of chlorazene solution as thoroughly as possible applied as a gargle.

When the augmentation of nasal secretion produced by the solution of salt of chlorozene has subsided, the oily solution of dichloramine-T is applied with an oil-atomizer, an endeavor being made to reach every part freely with the oil. Introduced in this way, the oil can not be expected to continue effective for more than two hours, so that for intensive treatment the application should be renewed at the end of that time. In any case, it is considered important to repeat spraying with the oil often enough to ensure at least four treatments daily at about equal intervals of time.

An outfit for carrying out this treatment has been prepared, and consists of three bottles, one containing dichloramine-T (44 grains), another, chlorinated eucalyptol (1 ounce), and the third, chlorinated liquid paraffin (4 ounces). The dichloramine-T is dissolved in the chlorinated eucalyptol, without heating, and the resulting solution incorporated with the chlorinated liquid paraffin. The outfit also includes a vaporizor which has no metal parts, but is made entirely of glass. The atomizer-bulb should be vigorously compressed from ten to twenty times for each nostril.

In a note added to their paper, Dakin and Dunham stated that Professor Sweet and Doctor Lee, both of Philadelphia, had undertaken to test the use of a similar oily mixture, containing 5 percent of dichloramine-T, as a surgical dressing for infected wounds.

In this issue of CLINICAL MEDICINE we reprint an article by Doctor Sweet (who is serving as a captain of the Medical Reserve Corps, United States Army, in a British hospital in France) upon the results of the treatment of wounds, there, with the oily solution, for the preparation of which he gives directions. As will be seen, this preliminary report is very favorable to the method, on the ground that it saves the pain of wound dressing and economizes both dressing-materials and the time of the surgeon, while the progress of the wounds with this treatment is most satisfactory.

DICHLORAMINE-T IN SURGERY

We learn from *The Texas State Medical Journal* for September last (p. 190) that at the meeting of the General Medical Board of the Rockefeller Institute, held on August 12, Doctor LeConte, of Philadelphia, presented the claims of dichloramine-T—Dakin's latest antiseptic preparation—which is twenty times as powerful as the watery solution used in the Carrel method of wound infections. The dichloramine-T is dissolved in eucalyptol and liquid paraffin and applied as a spray. The claim for superior merit for this disinfectant was based upon an experience of over 4000 cases in the hands of Doctor Lee, of the Pennsylvania Hospital, and its entire junior staff, and Doctor Cummins, surgeon for the Midvale Steel Corporation.

The new antiseptic is put on but once in twenty-four hours, seems efficient, is rapidly and easily applied, and accomplishes an enormous saving in dressings and surgical supplies. Doctor Sweet states that in his base hospital now stationed in France 30 acute cases have frequently been dressed within ninety minutes; that more than 50 percent of gauze and cotton has been saved; and that, in all, 186 wounds were dressed with 150 mils (Cc.) of the oil-solution, these being bad cases of thigh and buttock wounds and compound fractures. Furthermore, 8 diphtheria-carriers yielding positive cultures after having been sprayed three times in twenty-four hours with a 2 percent dichloramine solution yielded no positive cultures during the next three days.

He further states that wounds when first clean stayed clean, as demonstrated by culture tests.

THE VALUE OF VERATRINE

Dr. A. T. Cuzner, in an article published in *Ellingwood's Therapeutist* for April last, says that there is one drug that is not taken at its full value, namely, veratrine. Doctor Cuzner continues as follows:

"As a febrifuge and an eliminant for such cases as call for its administration, we find it all that could be desired. A short episode in my own medical experience will not be amiss at this time.

"I was called to attend a neighbor in her confinement. It was the third child at which I had officiated; each labor was easier than the one preceding it. When I left my patient, three days after the advent of a fine boy, she was in a splendid condition. Two days later, I was called again in haste. I found her with high-flushed face, and the thermometer indicated 103 degrees temperature. On inquiry, I found the flow of urine was scanty and of high color; the bowels had not moved in two days. There was, certainly, autointoxication.

"The treatment indicated was, elimination. I first cleared the lower gut by an enema, following the same by a pellet of veratrine, of 1-134 grain, every hour, as a febrifuge and an eliminant. These pellets worked like a charm, guided, doubtless, by a cathartic combination of calomel and podophyllin. In less than twelve hours, our patient was out of all danger.

"Such cases as this, of which I have had many similar ones, have strengthened my faith in the curative power of drugs when intelligently administered."

INTRAVENOUS ADMINISTRATION OF EMETINE

After reviewing various contributions to medical literature in which the toxicity of emetine is discussed, Dr. J. W. Larimore (*South Med. Jour.*, Aug.) gives it as his own opinion that the presence of 0.05 Gram of emetine in the circulation (the amount declared necessary by Vedder and by Rogers to secure an efficient amebicidal action) can be best secured by injecting 1 grain (Gm. 0.066) of emetine hydrochloride intravenously. This dose is larger than usually recommended, even for subcutaneous and intramuscular administration; still, the author has not observed any injurious effects from it.

The author reports 10 cases of amebic dysentery treated, during the past year, with injections of emetine given in 1-grain doses dissolved in 1 mil (Cc.) of fluid. The injections were given quickly. In another case, which was not an amebic—the drug being given for therapeutic test—there occurred, after twenty-four hours, a severe attack of vomiting and diarrhea. This, however, could not be positively attributed to the injection, since the patient showed a blood pressure of 180 millimeters and an occasional intermittent pulse. The symptoms apparently were gastrointestinal rather than circulatory, unless possibly there was a circulatory element involved in the vomiting. The gastrointestinal irritation tends to support the author in believing that the emetine had not necessarily caused the vomiting and diarrhea; for, Pellini and Wallace have demonstrated that the action of emetine is exerted upon the heart-muscle, and not upon the vagus nerve.

The author concludes that the intravenous administration of emetine, in 1-grain doses, having been injected undiluted and rapidly, without causing serious or even inconveniencing symptoms, has been shown to be a safe procedure.

SAFE TECHNIC FOR MAKING INTRAVENOUS INJECTIONS

Of late, many remedies are being administered by the intravenous route, when they can not be injected subcutaneously or into the muscles, for the reason that they tend to produce annoying and even dangerous local irritation. The occurrence of these objectionable symptoms is obviated by the direct introduction of the medicament into the blood stream; however, it is important that upon inserting and upon removing the needle none of the solution enter the tissues adjacent to the vein.

In a communication on the intravenous administration of mercury salts (*Wis. Med. Jour.*, March, 1917), a method for the intravenous injection of mercury is described by which these disadvantages can be overcome, and which is applicable

for other remedies. The author proceeds as follows:

The dose of the mercury bichloride is made up to 3 mils (Cc.) with physiologic salt solution. A fine, sharp-pointed, 20-gauge needle is then fitted to the syringe, great care being exercised that the mercury solution does not get into the lumen of the needle. The arm is now constricted until the veins at the bend of the elbow stand out prominently. After wiping the skin with alcohol, a quick thrust is made into the selected vein. The piston of the syringe is pulled out, when the blood will flow into the syringe, if the needle-point is inside the vein. The constricting band is then released and the solution injected. The needle is left in place for two or three seconds. *Before withdrawing the needle, draw blood back into the syringe.*

Proceeding in this manner, there is no chance of even the least fraction of a drop of mercury solution getting into the tissues. If these directions are strictly carried out, *The Wisconsin Medical Journal* feels sure that no phlebitis and no tissue reaction will ensue.

EARLY DIAGNOSIS OF INFANTILE PARALYSIS

Since it is commonly agreed that the difficulty in controlling acute anterior poliomyelitis in a great measure lies in the large number of unrecognized cases that are responsible for its continued transmission and dissemination, the Commissioner of Health of Chicago (*Bull. Chicago School of Sanit. Instruct.*, Sept. 22, 1917) calls attention to the symptomatology of the disease in its first stages, in the hope that it will aid practitioners in the early identification of doubtful cases.

While those cases of the disease that are associated with paralysis are easy of recognition, the nonparalytic cases present great difficulty. However, the onset is definite; there is fever, not always high; about half of the subjects vomit; drowsiness is pronounced, stupor even being observed, although the mind is clear; hyperesthesia is present and irritability often is marked. Inability to flex the head upon the chest is present early in the attack, and in virtually all cases, and is probably the most helpful symptom in diagnosticating. Accompanying this rigidity, is a weakness of the anterior neck-muscles that permits the head to fall back to a marked degree. The gait at this time usually is ataxic and there is a distinct disinclination to walk. In the mild cases, fever, somnolence, constipation, hyperesthesia with or without headache and especially stiff neck, should indicate the necessity of making lumbar puncture.

During the prevalence of the disease, every febrile disturbance should be carefully studied and its cause determined, in fact, during an epidemic the occurrence of elevated temperature and hyperesthesia warrants the performance of spinal puncture.

After the appearance of the paralysis, the diagnosis is much easier. In the mild cases, the state of the reflexes is important, absence of diminution of any reflex being of confirmatory value. Ability to walk is not incompatible with the disease.

No case of suddenly developing muscle weakness may be disregarded, and such instances must be looked upon as potential cases of poliomyelitis, until they are proved to be something else. Any well-defined local palsy in a child that has undergone an indeterminate illness should hint at infantile paralysis; in fact, a mere lessening of muscle power, of ability to walk or of the reflexes should make one suspicious of the disease, more particularly if occurring after an acute illness, with elevation of temperature, and especially so in summer.

In cases of doubt, lumbar puncture should be undertaken for the purpose of establishing the diagnosis. In general, it may be said that the occurrence of temperature and hyperesthesia during the prevalence of the disease is sufficient to call for the early puncture, for this purpose.

SPECIFIC EARLY TREATMENT OF ACUTE ANTERIOR POLIOMYELITIS

In *The Boston Medical and Surgical* Journal for June 19, Dr. Helmuth Ulrich tabulates the results of cases of acute anterior poliomyelitis treated at the Haynes Memorial Hospital.

In 20 cases treated with "immune" serum, improvement was marked in 8, it was moderate in 8, it was slight in 2; while 1 patient died in six weeks.

In 16 cases receiving normal serum, the

improvement was marked in 6, it was slight in 3; while 1 patient died in six days.

In 20 cases treated with spinal fluid ("autotherapy"), the latter being injected subcutaneously immediately after its withdrawal, improvement was marked in 8, it was moderate in 7, slight in 5.

In 20 cases in which three lumbar punctures were made at 24-hour intervals, the improvement was marked in 8, moderate in 8, slight in 2; while 2 of the patients died.

In 28 cases in which only general measures were employed, the improvement was marked in 10, moderate in 9, slight in 8; while 1 died.

There remained 16 cases, in 1 of which the diagnosis was doubtful, and none of which is included in the preceding tabulation. One of these patients died, in three weeks, of pneumonia, and the others died within two and forty-eight hours after their admission.

It will be seen that the percentage of the "marked-improvement" cases is the same—namely, 40 percent—in the patients treated with "immune" serum, by autotherapy, and in those in whom lumbar puncture was performed.

THE TREATMENT OF ANEMIA RESULTING FROM MALARIAL FEVER

Of all diseases, Forchheimer declares in his book, "The Prophylaxis and Treatment of Internal Diseases," malaria must be the one that causes the greatest destruction of the red corpuscles, and, therefore, produces anemia. It is well to give every subject of malarial disease, during the convalescence, any one of those remedies that are recommended in anemia, but, arsenic especially has proved very valuable.

In treating the anemia consequent upon malarial infection, the fact must not be lost sight of that quinine not only is specific for the malarial disease itself, in that it exerts a destructive effect upon the plasmodia, but, that also it may manifest a tonic action in the direction of stimulating the hematopoietic mechanism. This is insisted upon by G. Paisseau and H. Lemaire, in a meritorious study of the anemia of primary paludism, which article recently appeared in *Paris Médical* (Aug. 4). These authors point out that, while the anemia of malaria is essentially amenable to the specific quinine treatment, the restoration of the normal blood state is facilitated by the classical treatment of anemic conditions.

Quinine may be administered, the authors point out, either continuously or interrupted from time to time; in the former event, a daily dose of quinine being given during the month following after the febrile malarial attack. The doses here employed may be from 1 to 2 Grams daily, taken in one dose, or in two or even as often as in five doses.

The interrupted mode of quinine treatment is based upon the fact determined by clinical experiment that the ameboid and young forms of the parasite are most sensitive to this drug. It is these that are found during the febrile attacks, while the gametes, that is to say, the resistant forms, predominant during the nonfebrile periods, frequently are confined to the hematopoietic organs. The interrupted quinine administration is preferred by most French physicians.

While some physicians limit their administration of quinine to the febrile attacks, others prescribe the medicament also before and after that stage. As for the authors, they maintain that every patient subject to malaria, whether it be acute or chronic, normal or occult, should first of all be made to undergo a thorough sterilizant treatment by means of continued and effective doses, which are to be maintained for a sufficiently long time. They agree with Gutman in claiming that not less than 2-Gram doses will suffice to produce satisfactory results.

As to the manner of giving the quinine, its administration by mouth has the decided disadvantage of giving rise to gastric disturbances, and these are increased by those referable to the malarial attacks themselves. It is advantageous, therefore, to adopt parenteral methods of administration, either the intramuscular, subcutaneous or intravenous. Intramuscular injections, however, are objected to by many authorities, as are also injections of concentrated solutions. Grall advises hypodermic injections of the selected quinine salt dissolved in a 1-percent physiologic salt solution. This is also the method of Caglio and Malafosse, according to whom the concentration of the solution should never be more than 1:20. Paisseau and Lemaire hold that intravenous injections of quinine are most suitable in all cases in which it is

important to secure rapid effects, and refer to the publication on the subject by Carnot and De Kerdrel, a translation of which was reproduced in our issue for May, page 349.

Regarding other than quinine treatment designed to overcome the malarial anemia, the authors refer to the fact that this is not a chlorotic condition, but, that it is associated with leukopenia and mononucleosis. It is for this reason that treatment with iron preparations can here be at best only supplementary to or associated with treatment with other remedies, notably arsenic. Arsenic, the authors point out, is above all, a stimulant of the hematopoietic function, which in malaria is notoriously insufficient. Very naturally, they say, the arsenic should be employed in organic form, namely, by injection of the cacodylate of sodium or of arrhenal (sodium methylarsenate). In addition to arsenical remedies, it is of use to employ preparations of red marrow.

Even after apparent recovery, the malarial anemic patient is in danger of experiencing recurrences of the anemia, and these may be more severe than the first attack. For this reason, it is necessary to prevent recurrences of the malaria, and this can be accomplished only by maintaining a state of general health through providing hygienic surroundings, particularly avoiding danger of reinfection by giving up residence where malaria is frequent.

TETANUS IN COURT-PLASTER

A recent report from the director of the hygienic laboratory of the Public Health Service states (*Publ. Health Rep.*, Sept. 7) that out of 13 specimens of court-plaster examined 2 were found to be contaminated with tetanus-bacilli. The specimens were secured from drugstores and were in original packages, exactly as the product goes to the consumer; there is no ground, however, for believing that the contamination was an intentional one. Whether the contamination occurred during the process of manufacture, through the use of infected ingredients, or subsequently by careless handling, remains to be determined by further investigation. It was also found that court-plaster is not "clean" in the surgical sense.

We have been under the impression that the use of court-plaster was becoming less popular; at any rate, we hope so. This means of covering small wounds is not without danger, for many reasons; principally, because as a rule the wounds are contaminated and prompt healing is prevented rather than promoted by sealing them up with the plaster. If an airtight covering is required, zinc-oxide plaster (adhesive) is much to be preferred and far safer.

A DELIMITATION OF THE TERM SCROFULOSIS

In an address delivered before the Medical Society of Bremen, Professor Schelbe (*Deut. Med. Woch.*) has explained to what clinical picture the oldtime term of scrofula should nowadays be confined, saying:

"The tuberculous affections of the skin, soft parts, bones, and lymph-nodes are not comprised under the designation of scrofulosis. Rather, this designation should be confined to that symptom-complex that makes up the picture of the facies scrofulosa, and which is based upon the exudative diathesis.

"As a rule, tuberculosis seems to come into question as a cause only in the production of the 'scrofulous' phlyctenular diseases, precisely as catarrhal infections, measles, and neglect may give rise to other symptoms of scrofulosis.

"The analysis of each individual case of 'scrofula' as an exudative diathesis, in conjunction with measles, with catarrhal infection, with neglect, and so on, will make possible a better understanding than does the indefinite, unclear collective conception of 'scrofulosis,' and it will point the way to a rational causal therapy. It is imperative to ignore the hypothetical tuberculous component."

GERMAN SYNTHETICS BANNED

Licenses under which German chemical firms have been exporting to the United States through northern European neutral countries serums, vaccines, antitoxins, and other biological products were formally revoked on July 21 by the Treasury Department. The order of revocation (*Med. Rec.*, July 28, p. 163) cites the inability of treasury inspectors to inspect the plants of the companies because of the war. Seven of the chief chemical firms of Germany are involved.

Miscellaneous Articles

Studies on Food Economics

VI—Gelatin, Fibrin, and the Juices of Meat

GELATIN is a very important element of animal-food, it is, in fact, the main constituent of the animal-tissues, the walls of the cells of which animals are built up being composed principally of gelatin. Half the solid parts of an animal are convertible, by boiling with water, into gelatin. However, gelatin thus obtained is devoid of palatability, so much so that even dogs will reject it unless they are driven to the verge of starvation. Thus, in the experiments of M. M. Edwards and Balzac, and repeated by many scientists since, young dogs that had ceased growing were fed on gelatin for thirty days, when they lost much flesh; when, however, gravy made from cooked liver or beef-extract was added to the insipid gelatin, the dogs eagerly devoured it and gained in weight.

It has been a custom in fairly well-to-do families in England to take, just previous to a hearty meal, a modicum of brandy as an assistant to digestion; now we know that alcohol coagulates the gastric juice or, rather, the pepsin of the same. The explanation of the efficacy of this practice is this: The small quantity of alcohol taken has the effect of exciting the surface of the mucous lining of the stomach and thus causing a flow of gastric juice. Mechanical stimuli have been found to produce the same result. However, if the food partaken of possesses sufficient sapidity, the same effect will be produced.

In hot countries, chillies are largely used in food to produce the like effect; the writer does not think either procedure good, however. A proper preparation of food will insure a sufficient desire for it and much aid its digestion. But, this phase of the subject will be discussed more in detail further on.

Fibrin.—Besides being a constituent of the lean, or muscular, portion of meat, it also forms a large proportion of the substance of cartilage and bone. Typical fibrin likewise is found as a liquid in the blood. When the blood dies or ceases to flow in its proper channels, it coagulates, or clots, becoming partially solid. After death, the fibrin located in muscle coagulates, also, and what is termed *rigor mortis* ensues. Muscular fibrin, called syntonin, is readily soluble in water containing 1/10 percent hydrochloric acid.

The properties of fibrin, so far as cooking is concerned, place it between albumin and gelatin; it is coagulable like albumin and soluble like gelatin, but in a minor degree. Like gelatin, it is tasteless and, alone, not nutritious. This latter fact has been proved by feeding animals on lean meat that has been cut up and subjected to the action of cold water, which dissolves out the albumin and the extractive material, including the osmazome. The experiment has been made in laboratories and also on a larger scale, where the lean beef, from which the "extract of beef" has been taken out by cold water, is prepared. When this lean beef, thus treated, was given to dogs, pigs, and other animals, they all refused it and suffered starvation when given them without other food.

Thus we find as we proceed in our study of nutrition that the flavor of our food has much to do with its digestibility and nourishment. We all know how the odor of nicely broiled chop or steak or a properly roasted joint of meat causes our mouths to water, that is, produces an extra flow of saliva and doubtless a flow of gastric juice.

One of the principal causes of the drink-habit among the lower order of workers in our slums is, the poorly prepared food they have to partake of.

Before leaving this subject, it will be as well to consider the quantity of meat or its

equivalent in vegetables an average working man weighing 140 pounds needs in order to be properly nourished and to sustain his power to work. These data have been established:

If fed on meat alone containing an average of fat, he requires 24 ounces of meat and 52 fluid ounces of water. If fed with a mixed diet of meat and bread, he requires 16 ounces of lean meat, 19 ounces of bread, 3½ ounces of butter, and 52 fluid ounces of water. In round numbers, about 3 pounds of solid food and about three pints of liquid food are needful.

In the process of soupmaking, when the object is, to obtain the greatest amount of soluble material in the water constituting the soup, prolonged boiling will be necessary. Expert cooks utilize all scraps of meat and bone they have at their disposal and subject the same to many hours of cooking at a low temperature, the resulting liquor constituting the "stock" or foundation, for the many kinds of soup they furnish for use after giving each its specific treatment.

A. T. Cuzner.

Gilmore, Fla.

A CORRECTION

Two numerical errors appeared in Doctor Haswell's article in the October issue of this journal, page 728, which should be corrected in the text.

On page 729, sub 3: "The State": The eighth line of this paragraph should read, "of approximately seven million insurable people under the act." In the second column on the same page, the thirteenth line should be, "budget of $93,000,000" instead of $3,000,000.

Please, enter these corrections right now, before forgotten.

CHLORAZENE INTRAVENOUSLY

Several months ago, I had a case of pulmonary tuberculosis in the third, and last, stage. The patient—a woman—was expectorating an enormous amount of so-called "laudable" pus. I never measured it, but, approximately it was at about a quart in twenty-four hours. Chlorazene is the pus-killer without peer, and it occurred to me to try it intravenously, so that it would go direct to the lung-tissue, from the heart, absolutely unchanged and there expend its force.

And it did. I knew my patient had only a few days to live, and I was only experimenting. She died in about six weeks after I used this treatment.

I gave her two injections in the vein, making my solution by guess from the powder. I injected about 10 grains to 90 minims of water, with an all-glass Luer syringe. There was one week's intermission between the two injections.

The woman complained about local pain all over the arm; but she was a "complainer," and I do not believe it hurt her much. Two doses was all she would stand for.

The first dose almost stopped the expectoration for four days. Then it gradually started again. The second dose acted the same, and I felt much chagrined that my experimenting was cut off short.

Before I used this, I wrote Doctor Burdick, asking him about the advisability of doing it; but, he gave me very little information, because he himself did not know; still, he gave me to understand that he would not mind risking it. So, it was done.

I believe chlorazene used intravenously early in the disease will cure consumption. I believe it will kill the bacilli.

Note: You will have to keep the plunger of your Luer syringe wet while you push it in, because the chlorazene will dry on it, and then you can not move it; but, that is not hard to do.

T. H. Standlee.

Temporarily at Ft. Worth, Tex.

[We have carefully abstained in these columns from advising anyone to give chlorazene intravenously. And, yet, we are anxious to know what will happen when it is so used. This is the "why" of the editorial note. Fact is, we know of several instances in which it has been used, and with alleged good results. In one case, which has been reported to us indirectly, there occurred a chill and rise of temperature following the injection, so that the physician hesitated to repeat the dose. In another—a case of sepsis—the patient's temperature fell, and the chills ceased under daily injections of what most of us would call *large* doses.

Apparently, judging from the animal-experiments and the clinical evidence at

our disposal, chlorazene is not toxic when introduced intravenously, except when the doses are large. What *are* large doses? Bless your heart, doctor, we don't know. Perhaps anywhere from 4 grains up. We do know that, in a dog, the equivalent of between 5 and 20 grains in a human did not seem to worry our experimental animal. Yet—we should not start with 20 nor even with 10 grains in treating a patient. Better begin with a very much smaller dose and gradually increase, watching the reaction closely.

The injections seemed to cause no pain whatever to the experimental animal, the one exception being when through poor technic a portion of the content of the syringe escaped into the tissues around the vein. We preferred to use a dilute solution, and we should advise a strength of 1 percent. As a vehicle, physiologic salt solution is best.

This is a virgin field—a field that has great promise. Who will go further?—Ed.]

PARRESINE FOR MUSTARD BURNS

Lately a woman had applied a mustard plaster to the back of her neck, which, by slipping down and left on too long, severely blistered her skin over a large area, and she applied for relief early in the morning. My first thought for burns is unguentine, so, I applied that freely and told her to call at noon, if necessary. To my surprise, she did call at my office at that hour, saying that her condition was, if anything, worse. Thereupon, I applied Abbott's parresine. After washing the parts with an antiseptic solution, I placed into an ordinary teacup, a sufficiency of the wax and placed the cup into a pan of water which was brought to a boil. Then, following directions, I applied, with an ordinary soft paintbrush, a heavy coat over the entire burn. As this gave relief from the start, I applied a thin layer of absorbent cotton over the layer of parresine, then brushed a second, heavy, coat of parresine over this cotton. The next morning, the patient declared that the application had worked like a charm.

J. P. Brandon.

Essex, Mo.

[We have knowledge of a great many cases, similar and also different, in which parresine gave immediate and lasting relief from the pain of burns, scalds, blisters, bedsores, and the like. Doctor Brandon's experience is supported by these others, as in its turn it confirms them.—Ed.]

YOUR CHANCE NOW

One of the results of the European war is, the shortage of doctors in certain localities, caused by the large number going into the Army. We already have had applications from several first-class men for physicians to take their places, either temporarily or permanently. We have no doubt that hundreds, yes, thousands of excellent openings are being created in this manner. Of course, after the war, the doctors mustered out will, in the majority of instances, step back into their old places; still, some never will come back, while others will find themselves fitting into new and better niches, through the elimination of those higher up.

If you are one of those men who want to find a better location, write us, and we shall do for you all we can. If, on the other hand, you are going with the forces and want to dispose of your practice, let us know, and we shall see what we can do for *you*. One of the purposes of Clinical Medicine is, to help every member of the profession who deserves help.

DOCTOR PRICE ON MORPHINE-ADDICTION

My article on the subject of morphine-addiction, published in Clinical Medicine for July (p. 530), has occasioned considerable correspondence and I wish to answer as many of the letters as publicly as I can, believing that many others are interested in the matter.

What was written about that treatment is true, and it occurs to me that the treatment recommended is the one to be preferred. One correspondent asks how sure I am that it cured me absolutely so. The answer is: "I am well and have been well for seven months. And, I took nothing else."

I do not think that the family physician can succeed very well without some previous experience. If anyone wants to try my method, he has all the directions in the article referred to above.

The drug [luminal, we take it.—Ed.] cannot now be obtained in the United

States; it is listed, without price, by Merck. The drug is safe if properly handled by the prescriber. The average time for which it has to be taken is ten or fifteen days; including recuperation, thirty days or more. I was cured in twenty-two days.

The treatment is painless—one old lady of 75, during her whole course of treatment complained only once of a little headache. Of all the patients with whom I have come in contact, not one has relapsed; none ever has felt a desire for the drug. I am willing to make affidavit to the truth of these statements, at any time.

M. G. Price.

Mosheim, Tenn.

WHAT WILL CURE GOITER?

The thirty years I have practiced in this part of western Iowa, I find goiter materially increasing; the last fifteen years, at least, in alarming proportion.

What factor is responsible for this regional development of certain diseases has not been settled as yet. The alpine sections of Switzerland, certain mountain regions of Germany and Austria, the mountain regions of France, the upper Thames Valley in England, Derbyshire, Hampshire, the central mountain regions of Asia, and likewise the mountain sections of Kentucky, Tennessee, and Montana are localities where goiter is very prevalent; and this is true also of western Iowa.

In the region last named, a great many cases of thyroid enlargement of greater or less degree occur among the male population. Some of these goiters cause no inconvenience whatever, others require treatment. For many years, I have collected and preserved data concerning the various modes of treatment as from time to time published in medical journals, and herein I want to tell the readers of Clinical Medicine my own limited experience in this direction.

I will mention here that, of all the methods of treatment proposed for incipient goiter, I have found not one remedy so effective for reducing enlarged thyroid glands as potassium bichromate; and even this often fails one.

Now let me tell of an experience in my practice. About two months ago, a woman, whose appearance suggested worry and a certain type of neurasthenia came to consult me. Her age is twenty, and she has one child. She has been in good health up to the time of the beginning of her present illness. She had some thyroid enlargement, but, this had not troubled her. The sudden death of her mother shocked her greatly, and she lost her appetite, suffered from insomnia, and became very nervous, while her weight decreased rapidly, from 180, to 140 pounds. She presented every evidence of thyroidism: tachycardia, rapid pulse (130, per minute), shortness of breath upon the slightest effort, and a constant tired feeling. The family physician had given her the best treatment he knew, but, without benefiting her. The following, prescribed by me, cured her in sixty days:

Tincture of nux vomica.....dr. 1
Solution of acid phosphates, compound (Burrough's) .....ozs. 3
Elixir of papaya and pepsin compound .....ozs. 3
Label: Take one teaspoonful, in water, one-half hour before meals.

In addition to the foregoing, she received: Quinine hydrobromide, 5 grains, one tablet to be taken between meals. Chromium sulphate, 5 grains, one tablet to be taken after meals. Trional, 5 grains, one dose to be taken when going to bed, so as to insure sleep.

In ten days, the woman reported great improvement; she was eating well and was sleeping well without the aid of the hypnotic. Her pulse had gone down to 80 per minute. The medicines were continued, but, the chromium sulphate was taken only twice a day. As she improved, the medicines were taken less frequently, but, continued until she was entirely well.

Sometimes the bromides act best; however, I have found their effect to be only temporary. In some of these cases, one will find the ferrohydrocyanate of iron (Tilden) to act very nicely for quieting the nervous erethism.

In reviewing the literature at command, I find that one doctor asserts that he has cured several cases of exophthalmic goiter with uranium nitrate in 1/10- to 1/100-grain doses, given every four hours. Another doctor expresses great faith in ammonium picrate, taken in 1-grain doses three times a day; and in strophanthus, 3 or 4 drops three times a day, to control the heart's action.

Doctor B. Ghosal, in an article read before the Calcutta Medical Society, asserts

that he cured large cystic tumors with dilute hydrofluoric acid, starting with 10 drops, repeated three times a day, and gradually increasing the dose, until 30 minims is taken in association with 3 drops of Donovan's solution, also three times a day. Has anyone confirmed his reported experience? Doctor Foster claimed, years ago, to have cured several cases of exophthalmic goiter with fluid extract of fucus vesiculosus in large doses. I tried it, but, it made no impression on my patient. He also said that he had effected cures with fluoric acid, in 1/10- to 1/100-drop doses, given three times a day. Has any member of the profession tested this out?

Dr. D. L. Field, in *The Medical Summary*, some years ago, declared he was curing, and "without a failure in a single case," all goiters treated by him, by the local application of an ointment containing poke-root, cannabis, strophanthus, and bromides. Dr. G. A. Harman, in *The Medical Brief* (I think it was), published what he asserted to be a marvelous treatment for goiter and claimed to have cured hundreds of patients. This is his prescription:

Triturate together equal parts of phytolaccin (Merck) and iodide of sulphur (Merck), and divide in 1-grain capsules, one or two of which are to be taken three times a day, according to age. He also said that this combination invariably would cure enlarged tonsils. I gave this a thorough trial in two patients having enlarged tonsils and thyroid glands, but, absolutely without any visible effect.

Dr. M. White, of Riley, Kansas, has contributed his "certain" cure of goiter (without a failure in 25 years) to medical literature, and this is the formula given by him:

Iodine crystals ..... drs. 2
Potassium iodide ..... drs. 2
Water ..... ozs. 5
Directions: Take of this 8 drops three times a day. Also, apply to the tumor as often as required.

This mixture is very unpleasant to take and I have yet to see any marvelous results from it—although I gave it a thorough trial. The experience of others may differ. Why will men publish articles not based upon facts? I doubt whether that treatment ever permanently cured one case.

Major McCarrison, of the East India Medical Service, says that, out of 100 cases of goiter treated with thymol, given internally (dose not mentioned), 58 patients were permanently cured. No fats, alcohol nor vinegar should be given while taking the thymol, as these are solvents and make thymol dangerous by dissolving it and, thus, absorbable. He asserts that goiter is due to parasites in the intestinal tract and that the thymol destroys these, whereupon the gland will diminish in size. I should like to know whether others have tried this treatment, and their results. A little over a year ago, I listened to a lecture, in Chicago, extolling the virtues of emetine hydrochloride in exophthalmic goiter, 1-grain doses in solution to be injected deeply into the enlarged gland. That time, it was in an experimental stage, and I am desirous to know their final conclusions. I want no theories or conjectures, but, facts.

What has the profession learned regarding the action of quinine and urea hydrochloride upon cystic tumors of the thyroid gland? Claim is made that it is particularly applicable to the vascular type and that it alters the structure of the gland in such manner as to diminish the hyperthyroidism. I have gone through the "Year-Books" for suggestions along this line, but, no treatment is mentioned. We know all about the various surgical treatments in these cases, and that men doing surgery exclusively look at these cases only from a surgical point of view. This is a mistake.

Doctor Kapper, an Austrian surgeon, employed an iodoform emulsion, after Mosetig's plan, injecting the emulsion, under strict asepsis, into the substance of the enlarged thyroid gland, sometimes daily and in other cases every few days, as the reaction indicated, and without one unfavorable symptom observed. He boldly asserts that in 15 consecutive cases a cure was effected in each one. My observation, though, is, that people object to the hypodermic treatment, owing to the pain it causes and the trouble it entails. I tried it in only one case, and that imperfectly; with apparently good results, however. If others have tried this treatment out, let us hear from them.

I have also used potassium iodide cataphorically, and am now employing it in a number of cases. However, it is exceedingly slow in its action. In one case that I have had under treatment, the gland shrunk to virtually normal in sixty days. Now, in this case, the potassium bichromate

and the phytolaccin and iodine sulphide did no good, while under another physician the patient had received Miller's soluble iodine (internally), also without material benefit.

I have employed, in the case of this woman, the galvanic current, and the results certainly are striking and remarkably satisfactory. I proceeded in this manner: One 3-inch pad I connected with the positive pole, and upon this pad, moistened, and curved to fit the goiter, I dusted freely pure potassium iodide. Gauging the current (with a millamperemeter) at 5 to 7 millamperes, I firmly held the prepared pad against the shoulders for thirty minutes; repeating this every three or four days.

What I am striving to arrive at are the particular types of goiter that experience has proved amenable to medicinal treatment, and the remedial agent and auxilliary measures, most effective in each individual type. If we are able to classify these cases, in the selection of curative treatment, then we shall have simplified the problem of their cure.

Summing up my observations, I will say that, if you do not get definite results from your selected treatment in hyperthyroidism, you are doing an injustice to your patient to postpone an operation. Late thyroidectomy spells failure.

Now, Brother Editor, it is up to you to add everything new you have gleaned from medical literature that you can personally vouch for as dependable in the way of medical treatment for the various types of goiter. Spread yourself and see what you can materialize. If goiter can invariably be cured in its early stages, it will mean a good deal to the medical profession and exceedingly more to the fair sex, who take special pride on possessing a beautifully shaped prepossessing neck, which nowadays is regarded as one of the charms of a good-looking woman.

J. H. Lowrey.

Neola, Ia.

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[Doctor Lowrey's paper proves one thing: There is no known "cure" for exophthalmic goiter. The innumerable remedies suggested are evidence enough. And, yet, I can not let the opportunity pass to urge again careful trial of Forchheimer's method of treatment in cases of moderate severity. This consists in the use of quinine hydrobromide, in 3-grain doses four times a day, in association with ergotin in 1-grain doses. The treatment must be continued for several months. It is important that the bowels should be kept thoroughly clean by the use of laxatives and intestinal antiseptics. It certainly is true that marked improvement as a rule follows this treatment; although, of course, it often fails. Surgical intervention should be resorted to if medical methods fail, provided the patient is a good "risk."—Ed.]

CANADIANS IN THE UNION ARMY

In the July number of Clinical Medicine, page 482, we are told that "more than 60,000 Canadians came down and fought for the Union during the Civil War."

In an argument, I showed this to a visiting patient, not pro-German. He smiled and said he would like to get the history of that, and where could it be found. He asked how these Canadians could have done such a thing when their government in England was helping the South and was courting what eventually became the Alabama Claims. Also he asked what the Canadians did in Vermont at St. Albans. So, if you can do so, please give me the reference covering the statement in question.

Henry L. Field.

St. Louis, Mo.

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[This information was taken from a current periodical, we think *The Literary Digest*. In this publication, the statement was quoted as coming from the official war-records, and we have no doubt as to its accuracy.—Ed.]

ABORTING TYPHOMALARIAL AND TYPHOID FEVERS

Some twenty years ago (before we had any railroad connection), when during one rainy season fevers of every kind were raging in nearly every home in Jasper County, Texas, where I was practicing, I formulated a plan of treatment a little different from the ordinary, and found it to be precisely what was required. This treatment consisted in first of all giving a purgative of calomel, rhubarb, and podophyllin in the evening, in order to clean out the alimentary tract thoroughly. At 4 o'clock next

morning I gave one 10-grain dose of quinine sulphate, then no more until the following morning at 4 o'clock. Now, at 7:00 a. m., I started with a powder which contained acetanilid, sulphide of calcium, and caffeine (½ grain), one to be taken every three hours during the day. If the fever became too high, say 103° or 104° F., I had veratrine and aconite given every half hour until it was reduced. Buttermilk, clabber milk, and chicken soup was the diet for four days. As a rule, the fever was aborted, in between three and five days, in 42 cases.

After that, I followed the treatment as a specific in all fevers, and I promised not to charge for my services after the fifth day, if the fever then continued. The result was that I had all of the fever-cases in that section. The other doctors' cases would continue for from thirty to ninety days. I still am aborting these continued fevers along this same line.

WILLIAM W. PUGH.

Ft. Worth, Tex.

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[The Doctor's treatment is that advocated by us for many years. The interesting point is, that he conceived and carried out the "clean-up" and intestinal-antisepsis plan as long as twenty years ago, and that it worked well—just as it has done good work in cases without number.—ED.]

WORRY, NERVOUSNESS, AND NEURASTHENIA

It is a peculiar truth that the medical profession, one of the socalled liberal professions, is in fact essentially reactionary and that new ideas meet with objection, obstruction, and discouragement on the part of the leaders of medical thought to a degree that is astonishing to thinking men and women. One might expect that the many lessons of the past would be taken to heart and that new things would not be discountenanced in advance merely because they do not fall in or agree with accepted or preconceived notions; yet, history repeats itself constantly and the experiences of Galileo, of William Harvey, of Semmelweis, of Holmes, as of many others, are duplicated over and over again.

The worst of it is, that new claims and new discoveries, advanced for the benefit of suffering humanity but discredited by medical authority, are avidly seized upon by quacks and irregular practitioners, and that then it requires long and tedious self-sacrifice and missionary work on the part of a few enlightened and courageous physicians to establish facts that should have been accepted long before, with the consequence that for many years afterward a certain stigma of irregularity undeservedly attaches to some modes of practice, just because of this intolerant spirit of the profession.

The studies of the last decade or two that have resulted in a more just and reasonable appreciation of the important influence which the mind exerts over the physical could have been expedited and shortened if the former materialistic tendencies of medical thinkers had not given the lie to their fatuous pretensions of honesty of investigation; if they had been willing, practically as well as theoretically, to admit their ignorance and to investigate along certain lines of thought that were suggested by others.

The consequence has been that views, ideas and practices as advanced, for instance, by Doctor Quimby, were ridiculed by physicians, only to be seized upon by and made the cornerstone of, that imposing system of Christian Science—ideas which, in the pseudo-scientific manner and with the unafraid daring of ignorance or half-knowledge, explained problems and puzzles in a manner which has since then been approached by medical thought, albeit upon the basis of reasonable and "scientific" argumentation. Hypnotism, mental healing, New Thought, all of these movements need not have arisen and, like Christian Science, have led astray many thousands of people—intelligent and sincere people too—if the medical profession had not, in its stupidity jeered at things which it could not understand and which it was too fatuously intolerant to investigate.

I do not pretend to have said anything new or startling, but have been moved to give expression to these thoughts by books like those written by Doctor Sadler[1] and by other authors, writings that would have been discredited, with a shrug of the shoulders, twenty years ago, but today are accepted as "good medicine." Doctor Sadler has rendered, by his writings, a distinct service, not alone to physicians, but to a host of patients, and more particularly those classed in the vague and elastic category

[1] "Worry and Nervousness, or The Science of Self-Mastery. By William S. Sadler, M. D. Illustrated. Chicago: A. C. McClurg & Co. 1914. Price, $1.50.

of neurasthenics. There comes to my mind, especially, his "Physiology of Faith and Fear" (reviewed in this journal in 1912, page 967), while the present volume stands out among the many books on this and kindred subjects because of the fearless manner in which the author presents his views and conclusions, and also by reason of the helpful and encouraging lessons presented by him. Doctor Sadler literally puts heart into those poor devils who "suffer agonies from their nerves," by explaining to them the actual nature and origin of their ailments and by showing them the way to health, not by haphazard administrations of medicines, but by pointing out the way to lead a reasonable and sensible life and how to adopt a wholesome and healthful mode of thought.

The present book is a companion volume to the one preceding it and deals mainly with the details of treatment and practical management of the neuroses, including a large group of "borderland" ailments—alcoholism, for example. This book is written, not for the guidance of physicians only, but also for their patients; and the author very properly lays emphasis on his own experience, that neurasthenics get little help from simply reading a book; they must read and reread; that is they should study this book systematically, say, one hour every day until its teachings become a real part of their mental life.

It is an encouraging sign that medical practice is becoming more tolerant, more broad and more catholic in its views and its methods. It promises well for the large class of functional diseases, especially those embraced in the category of neurasthenia, and justifies the hope that eventually this curse of modern civilization may be understood fully and, consequently, dealt with justly and successfully.

Most of the general remarks made in the preceding, may be taken to apply to Doctor Kellogg's book[2] on neurasthenia, and to many of his other writings. The author insists upon the importance of the simple life for relieving the many ailments that afflict present-day humanity, and, for many years, he has been one of the foremost advocates to such a mode of living. It is of interest that, years ago, Doctor Kellogg was assistant to Dr. George M. Beard, of New York, when that eminent neurologist coined the term "neurasthenia", so that he has had an opportunity to become thoroughly familiar with Beard's views regarding its treatment, one of the characteristic features of which was, even then, the almost absolute disuse of drugs—at that time a very heretical position.

While Doctor Beard regarded neurasthenia as a distinct disease, his pupil, Doctor Kellogg, maintains that it is a symptom, and that it indicates a state of exhaustion of the vital resources, the result of neglecting to conform to the great biologic laws that have control over the functions of mind and body, just as the law of gravitation controls the movements of the planets. The results of this ignoring of natural laws and principles have been accumulating during many ages and are now evidencing themselves in exaggerated form in a widespread degeneracy, which in recent years has attracted the attention of intelligent and thoughtful people in all parts of the civilized world.

In Doctor Kellogg's opinion, the cure of neurasthenia consists in returning to nature and in the cultivation of a more simple life. He believes that an intelligent application of the simple but thorough-going measures advocated in this little work will be found efficient, not alone as a means of preventing neurasthenia in those predisposed to this condition, but also for curing every neurasthenic who is not so far depreciated by his disease as no longer to be able to follow a definite or restricted course of life.

The author discusses the various aspects of the neurasthenic state as it is induced by chronic fatigue, by auto- or by drug-intoxication, by perverted religious conceptions, and by sexual perversion; also by worry. The treatment in nowise can be called simple, even though the methods proposed are simple enough, since it is unavoidable that great painstaking and perseverance are called for on the part of the physician, and even more on that of the patient, in order to obtain results; and, neither perseverance nor patience are characteristic attributes of neurasthenic persons, nor are they, as a rule, manifested by physicians in their attitude toward these patients. We doctors have to change many things in our own selves, first of all, before we can think of dealing successfully with these diseases.

[2]Neurasthenia, or Nervous Exhaustion. With Chapters on Christian Science and Hypnotism, "Habits" and "the Blues". By J. H. Kellogg, M. D., Superintendent of the Battle Creek Sanitarium. Second edition, enlarged and revised. Battle Creek, Michigan: Good Health Publishing Company, 1915. Price, $2.00.

Books like this one and the one considered just above will aid the sincere physician, in his efforts.

Chicago, Ill. H. J. ACHARD.

LOBELINE IN PUERPERAL ECLAMPSIA

I wish to express my appreciation of your journal and its universal helpfulness. Reading of lobeline and its uses in *Helpful Hints,* I tried it out.

Mrs. S., age 20, primipara, consulted me repeatedly during her term of gestation, and I found nothing abnormal at any time. About three weeks before term, she began to show some general edema, but, not as yet any albumin in the urine, and the amount voided was normal. The edema gradually disappeared during the following week, except for some swelling about the eyes in the morning. She felt well and went to assist a neighbor woman to cook for a haying crew. Just at dinner-time, the room being very warm, she stepped out to cool off, when, a few minutes later, she fell to the ground. She was carried into the house and a nearby physician called, who found her unconscious and in a few minutes saw her have a uremic convulsion. Thereupon I also was summoned. I immediately set to work dilating the cervix, while the patient was yet under the influence of ¼ grain of morphine given by first physician. Not much chloroform was required to permit of dilating the os, and a 6-pound dead baby, feet first, was extracted.

Up to this time—3:00 p.m.—the patient had had four convulsions. By 7 p.m. she had had four more; by 4 a. m. the next morning, there were fifteen more seizures. As the patient vomited from the start, nothing was retained, if anything could be swallowed at all. She was given nothing except lobeline, 1/100 grain hypodermically, every three hours, and sodium bicarbonate solution rectally, by enema and also by the drop-method. Under this treatment, the pulse, temperature, and respiration, all of which were high, began to come down; the kidneys, bowels, and skin became active, and in seventy-two hours the woman was as well as in a normal confinement. Did lobeline do it?

Soldier, Ia. E. C. JUNGER.

[We predict that physicians will eventually come to use lobeline sulphate very extensively. The power of this alkaloid as a relaxant certainly will commend itself to the increasing number of physicians who are coming to look upon all narcotics with distrust. A remedy that will relax spasm, as lobeline does, should be useful in many painful and convulsive conditions, such, for instance, as hepatic and nephritic colic, delirium tremens, asthma, and dyspnea from various causes. Lobeline is said to be of value in acute suppression of the urine. Veterinarians praise it as effective in azoturia (acut hemorrhagic congestion of the kidneys), and have combined it with strychnine and atropine in the treatment of the colic of horses.

If any of our readers can tell us anything about their experience with this alkaloid, we shall, to use the word of T. R., be "delighted."—ED.]

MUST HEROIN BE DISCARDED?

Almost every drug, without regard to its worth, has its periodic attack, as well as its period of advancement. During the past two years, heroin has been the central drug to be exposed to its period of attack. However, it is interesting to find in the numerous communications regarding the great dangers supposed to be lurking in this drug how little there is said about any direct clinical study of it. These communications very largely are restatements of what harm some famous physicians have thought that heroin may have done somewhere, sometime, in some unknown way. It has not even been shown that the United States Public Health Service, in so radically denouncing this drug, has not to a large extent been influenced by these indirect reports.

Heroin is the diacetic-acid ester of morphine, derived directly from morphine by a process of condensation; yet, in its therapeutic action it differs from morphine much more radically than codeine, narcotine, and any of the many other alkaloids derived directly from opium.

It does not require acute clinical observation to learn that heroin exerts a unique action upon the respiratory centers, increasing the rate and the force of the respirations, and, yet, is a more powerful respiratory sedative than morphine itself. This may seem to be a contradictory statement. If you do think so, observe its action

closely yourself and you will discover that it is not. Try a 1/16-grain dose of the heroin salt in an acute laryngeal or bronchial annoying dry cough, and for control an equal dose of the morphine salt or ¼ grain of the codeine salt, and you will readily see that heroin is the greater respiratory sedative of them, yet, there will not be the dry throat or the constipation following the dose or two of morphine or codeine.

Heroin decreases all of the secretions much less than will an equal amount of morphine or codeine. This minor influence upon the secretions will account largely for its slight constipating effect upon the bowels and slight nausea produced by it. Of course, everyone knows that heroin does not equal morphine as an analgesic, and, perhaps, its general sedative action is less than that of codeine.

On the other hand, I know of no authentic clinical observation going to show that the deleterious action of heroin upon the heart is any more pronounced than that of an equal amount of morphine or codeine. My observations do not support this contention. I, for my part, should confine the use of heroin to acute and subacute laryngeal and pulmonary conditions almost entirely. It will be found to be satisfactory in the annoying cough of measles and often also will yield excellent results, for temporary relief, in the passive congestive dyspnea of cardiac or renal insufficiency I have not tried it in bronchial asthma nor in pulmonary tuberculosis, inasmuch as we have at command, other more satisfactory agents for those diseases.

As to the alleged great danger in heroin because of its habit-forming properties, that, to me, seems a farfetched consideration. The Harrison Antinarcotic Law is working out marvelously well, and, judging from present indications, narcotic habitués will be a curiosity ten years from now, excepting for the few socalled "legitimate" ones. C. B. Farr's report—as printed in your editorial of the September issue of Clinical Medicine—only would go to indicate the infrequent observation of the opium-habit in the Philadelphia General Hospital, in 1911, and the general rounding-up of all narcotic habitués under the operation of the Harrison Act in 1915.

Personally, in a large general practice of thirteen years, I have not encountered a patient having the heroin-habit. There is no more reason for a patient knowing that he is taking heroin than there is for him to know that he is receiving hexamethylenamine; while at present there would be no opportunity for having such a prescription refilled by the druggist.

Why, then, discard a distinctive, active, successful therapeutic agent simply because it has been misused by someone somewhere three years ago.

Dowling, Mich. Guy C. Keller.

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[Doctor Keller presents a good argument in favor of retaining heroin as a remedy. What does the "family" say about it? Let us have your personal experience, please, and, likewise, your conclusions.—Ed.]

WHAT SHALL HE DO? WHAT WOULD YOU DO?

Some years ago, a young lady of good family of this place married and became the mother of a boy. Two years after the birth of the child, the father died. Before his death, he instructed me to write to his father, who lived in the East, for funds, as his finances were exhausted. This I did, and in answer to my letter informing him of the death of his son he confessed that he was a fullblooded Negro, while his wife was a white woman. His son had represented himself as being of Spanish descent. Now comes a problem that I should like to have solved for me.

The boy in question is growing up, but, he gives no sign of having Negro blood in his veins, being, in fact, a handsome lad. Before long, this young fellow naturally will want to get married. Then suppose that his choice happens to be the daughter of one of my friends. Some of his children will manifest in a greater or less degree the Negro blood of the grandfather. Of course, I destroyed the letter that I received from the latter with about the promptness that I would a snake.

Now, what would be my duty in the premises? I assure you, this matter disturbs me greatly, and I should like to hear the opinion of yourself, as well as that of others. It must be borne in mind that I

possess no proof of what I am telling; although, no doubt, that could be obtained.

H.

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[Theoretically, the solution of this sad difficulty is a simple one. Practically—to tell the truth, we hesitate to offer definite advice. Will our readers give us their opinions? One word. We have read of similar happenings in novels, but, we never have become cognizant of any actual instance of this kind, as the one here submitted. Yet, no doubt, the same problem must have confronted physicians and others, especially lawyers, before now. What is our correspondent to do? Has he any duty in the matter? And, if so, what is it?—ED.]

"WOMEN TALK"

In reply to your editorial, "Get Rid of Jealous Wives"—yes, get woman doctors—they don't tell anything—oh, no. I never knew but one woman doctor that could write a prescription or diagnose a case without consulting a man doctor. I once heard one tell my husband, out on the porch, all about women's and girls' diseases, things I should not tell my own grandmother in the dark (and I also knew the patients named were employing her, because they dreaded going to a man). The porch was only three feet from an open window of my neighbor's, and they heard every word she said, and told what they heard. The doctor's wife did not. When women tell everything to their woman friends, what difference does it make, anyway?

A man told his wife that another man had told him that his wife always was having her monthly period when he came home from his trips, so that he had to hunt other women. Men don't talk! That man's wife was mortified to death.

I know a prominent physician's wife who shielded her husband from a terrible scandal for his whole life. It never was given out. She herself was a broken-hearted woman, but, that was not known to anyone but her mother.

I know a doctor's wife who returns home from visits to her parents and finds her gowns in her closets scented up with musk, a perfume she never uses. She goes on in her daily sorrow in silence. He is a great surgeon, very popular, very handsome.

Two doors from me live a doctor, his lovely wife, and their two little children. He never reaches home until 2 o'clock in the morning. He has taken dozens of women and girls out to roadhouses, and tells his wife so. Her mother is dead, her father is too poor to take her and the children. She told me how she had walked four days trying to find work, but, on account of her babes, she was refused. She also goes along in her broken-hearted life. What can she do?

I know a doctor almost eighty years of age who spends most of his time with young girls about sixteen or seventeen. I heard him say that his wife was "not gay enough" for him. She was "too old fashioned."

The most of these physicians came from farms and they married girls who went through poverty and everything else for them. Then, when these men got up in the world and had become successful practitioners, they got so egotistical that their wives are in their way—that is the whole case in a nutshell. There are precious few of the men but what need a few inches taken off their silk hats. I have been a doctor's wife for fifty years, and I know. Being a musician and artist, I was not so terribly alone as are some of my dearly loved doctors' wives.

I resent the slam in your September number.

JUSTICE.

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[These comments upon the editorial (September issue, page 621) give another side of the question; and, indubitably, as true a one as that presented in the editorial which "Justice" resents so fiercely. "Justice" is an able and earnest defender of her sex. Moreover, she is right, deplorably so, in many ways. But, so was the writer of the editorial in question. It all amounts to this, that we are, none of us, perfect; that, in fact, we all are very prone to kick over the traces—physicians, lawyers, clergymen—just as much as are business men and others; and none of us need assume any smug, self-complacent, I-am-holier-than-thou attitude. For all that, and while deep in our hearts we may have to cry, *mea culpa!* we, nevertheless, should call attention to wrongs where they exist, provided that by doing so erring men and

erring women may be brought to mend their ways. We do not blame or chastize; we but depict what we see and hear.—Ed.]

SOME HYDROTHERAPEUTIC SUGGESTIONS

In the following, I wish to submit some hydrotherapeutic suggestions, with especial reference to the alternate use of hot and cold water.

First, let us take the patient suffering from cold and clammy feet. Give a hot foot-bath in which is dissolved a tablespoonful of potassium permanganate, keeping the feet in for twenty minutes. Have ready a pan of icy-cold water containing a teaspoonful of oxalic acid, dip the feet into this for one minute then, with a strong heavy towel, taking it at both ends, with a sawing motion, rub the soles of the feet into a warm glow. Repeat this two or three times a week and keep at it several months, and the trouble will surely be relieved.

The same procedure is also effective for chilblains; but, prescribe, in addition:

Solution lead subacetate.....30 minims
Carbolic acid ..... 2 drams
Glycerin, enough to make..... 2 ounces
Directions: Apply to the chilblains twice daily.

This is also good for inflamed bunions and corns.

For bedwetting, in the case of nervous and puny children, after correcting any discoverable causes (such as tight and adherent foreskin, pinworms, kidney disorders, and such), give a full hot bath at bedtime, then have the child stand in the tub and from a pitcher full of cold water pour a small stream, from a height of about two feet, on the spine from neck to sacrum. It is best to begin the douche with lukewarm water; for, if you start with the cold, you are likely to have a small rebellion on your hands. However, most children get to liking these baths, for, the effects are exhilarating, producing a fine sense of wellbeing. No therapeutic measure that I ever have used has given more gratifying results than this one.

For sick and nervous headache, especially that of frail and nervous women, give a full hot bath, containing a handful of epsom salt; then give a good rub with a hard towel, put the patient to bed, with a hot-water-bottle to the feet. Also, give her a drink of hot water, weak tea, or, better still, a half teaspoonful of aromatic spirit of ammonia in some water and an ice-bag to the back of the neck. Your patient will nearly always go to sleep, waking up free from the headache and nervousness.

The same procedure is fine also for persistent insomnia.

For the stiff and painful joints of subacute and chronic rheumatism, give a full hot bath, containing about 2 ounces aromatic spirit of ammonia, then rub the patient good and hard with a coarse towel, put him to bed, dip a heavy towel into a strong cold solution of epsom salt and apply to the affected joint, holding the application in place with a woolen bandage. Leave it on for an hour at a time, and then replace with a dry woolen bandage.

For diseases of the rectum and anus, such as hemorrhoids, fissure, and so forth, fill the colon, at bedtime, by hydrostatic pressure, with hot physiologic salt solution, using for the purpose Doctor Terrell's "cascade." In the morning, with the same contrivance, fill the rectum with a cold solution of 10 grains of boric acid and ½ grain of zinc sulphate to the ounce. The patient can easily tell when the cold solution begins to flow through the sigmoid flexure and should stop injecting as soon as this takes place. The effect of this simple procedure on the pelvic circulation is astonishingly good and can not be duplicated by any other means. The same principle can be applied to other pelvic disorders, besides those mentioned.

Here is an illustrative case: A stockman had been suffering from chronic diarrhea for twenty-five years, during which time, he had consulted a number of the best doctors in America, but got no relief. At last he came into my hands, and I was determined that I would cure him; however, after fifteen years of trying every possible kind of treatment, I was almost ready to admit defeat. I got some improvement from stomach lavage and strict dieting, but, could not cure the diarrhea. The patient was thin, nervous, and irritable. At last, some five years ago, I procured the socalled cascade. Before very long, he soon quit complaining and in six months he had grown fat, hearty, and cheerful, and has not had a sign of his old trouble ever since. His trouble evidently

was owing to inflammation (chronic) in and around the sigmoid flexure.

Miles, Ia. W. A. MARNER.

THE FOOD VALUE OF HORSE-FLESH

There is a peculiar instance in the survival of ancient teachings and superstitions manifested in the abhorence against horse-flesh as a food. Utilized for human consumption by various nations, including the early Germans, and, indeed, entering as an integral part in their religious ceremonies, horse-flesh was sacrificed and eaten by the inhabitants of ancient Germania and in all the countries further north, in honor of Odin and Freya. The horse being sacred particularly to Odin, the Christian missionaries who succeeded in converting the Germanic tribes very naturally objected to its sacrificial and nutritional employment, declaring it to be sacrilegious and not in accordance with the laws of the true God. And this proscription persists, albeit unrecognized, in the minds of the people to the present day.

Yet, there is nothing in the eating of horse-flesh that should shock even the delicate and squeamish. As Dr. C. J. Marshall points out in the *Monthly Bulletin* of the department of public health and charities of the City of Philadelphia for May, horse-flesh is virtually as nourishing as beef, and the horse is one of the cleanest animals we have, so that there seems to be no good reason why the most fastidious person should object to eating it.

As a matter of fact, the custom of eating horse-flesh was reestablished a little over a century ago, first in Denmark, where during the siege of Copenhagen, in 1807, much horse-flesh was consumed as food. The example of Copenhagen soon was followed in the entire country. In 1816, a slaughter-house was established in Berlin, for slaughtering horses, and this proved so popular that within the next year eleven such establishments were opened in that city. Fifty years later, the French began to look upon the consumption of horse-flesh with favor, and since then have greatly extended the use of horse-flesh as an article of food. Indeed, a considerable percentage of the meat now consumed in the European countries is obtained from horses.

In the United States, the eating of horse-flesh never has become popular, and this largely for sentimental reasons.

It was in France that the specific employment of raw meat (beef) was urged in the treatment of tuberculous patients, it being asserted by Richet and Héricourt that the juice of the raw meat contained properties of almost specific value against tuberculosis infection; and, also in other diseases associated with disturbed nutrition. It was claimed, some years ago, that horse-flesh possesses these meritorious properties in a greater degree, even, than does beef, the argument being advanced in support that horses hardly ever acquire any tuberculous disease. Dr. S. Bernheim, notably, wrote much in favor of the employment of horse-flesh, or, better, of the juice extracted from horse-flesh, in the treatment of tuberculosis, and he was instrumental in the preparation of "horsine," that is, the juice of horse-flesh sterilized by a cold process, and which was claimed to possess superior nutritional and therapeutic advantages.

A few years ago Dr. Daniel Schilmann, at that time physician in one of the tuberculosis sanatoria in Paris, published a detailed study on the subject of "zomotherapy," particularly in tuberculosis (*Zeitschrift f. Tuberkulose*, vol. 20, 1913), in which he paid close attention to the employment of horse-flesh and of the juice obtained from it ("horsine"), and arrived at the conclusion that the evolution of experimental tuberculosis is retarded by zomotherapy, and that the use of horse-meat or of the juice derived therefrom is of greater value and less objectionable than that of beef. Schilmann maintains that zomotherapy does not constitute forced feeding, but actual treatment. He attributes, in common with many other authors, the superiority of juice obtained from horse-meat to the fact that horses are more resistant to tuberculosis than are cattle.

Aside from the medicinal employment of meat-juice, especially of "horsine," it may be stated that the utilization of horse-meat is fully as legitimate and as reasonable as is that of beef, since horse-flesh is practically as nourishing as beef. Indeed, I am under the impression that at the present time those abattoirs in France in which horses are killed for the market are very active, because of the diminishing importation of cattle from the western hemisphere. It even may come about in our own country

that the use of horse-flesh as a food will become more popular, for the reason that it is less expensive than beef. In such a contingency, care would have to be taken to enforce an efficient system of meat inspection for the reason that certain diseases afflict horses, capable of being transmitted to humans. None but healthy horses should be slaughtered, and they should be killed under proper inspection and the meat be sold under its true name.

Since many persons now living in the United States have learned to eat horse-flesh before coming to this country and, hence, do not object to using it, there is no good reason why it should not be made possible for them to secure this relatively inexpensive article of food, if they desire it; with the protection, however, that could be given by the city, state, and federal governments, in looking after the health of the animals slaughtered and the general care given meat of this kind. Such food should be provided, and it should not be wasted, as is done at the present time.

In most countries were horse-meat is used for human food, it is not permitted to be sold at a regular meat-market where other meats are sold, but is handled by special licensed horse-meat markets. In some places, it is not permissible, even, to slaughter horses where other animals are handled. Most of the modern municipally owned abattoirs abroad are equipped for slaughtering horses, as well as cattle, sheep, and hogs. Such abattoirs are under a good system of meat inspection.

H. J. Achard.

Chicago, Ill.

CHINESE IDOLATRY AND MEDICAL SUPERSTITIONS

Our good ship was cosmopolitan in the full sense of the word—twelve languages were heard spoken. The Chinese were well represented, and this being their first voyage they used only their own language.

Our company was cosmopolitan in character as well as in language. We had on board fragments of a wrecked arctic exploring party; also a man and his wife from Australia on their way home after six months of wandering. They left Sydney for a short pleasure excursion, but were cast away on a desert island inhabited only by a cattle-herding Englishman, who was monarch of all the land that he could survey. Here they spent months walking the beach, watching and hoping to hail a passing ship. Finally they reached San Francisco and now, after six months' absence, were returning to Sydney to explain the why and wherefor.

Then there was the sailor-dog. He had spent all his life on shipboard—twelve years—had mastered many tricks and could climb a mast almost like a real sailor. He was my pet daily companion. One day, missing his canine greeting, I was told that, the dog having grown too old to perform his accustomed tricks, his keeper had thrown him overboard. A cruel and inhuman act, one that I can never forgive or forget.

I was told that the greatest danger in our 3000-mile voyage was from the presence of so many Chinese. It was understood that in case of accident and danger we could expect no help from them. They would infer that we were being punished by an angry god, and they would not dare to interfere. They must have had in mind renegade Jonah's history.

In a former paper, I told of a visit to a Chinese temple, where we were cordially received and entertained by the presiding priest, and who presented us with various curios. Here we saw the painted idols and their worshippers, and had an opportunity to study these peculiar people with regard to their idol-worship.

But, the purpose of this paper is, to consider Chinese notions and practices regarding medicine and surgery—which certainly are unique. The statements here made are based upon investigations made by Prof. William W. Cadbury, physician to the Canton Christian College.

In Canton, there are temples dedicated to the "spirit of medicine," that is, of healing. The people, especially the women, believe that the deity there presiding will restore health upon the payment of money to the priest and the performance of certain rites. Paper money is burned as an offering to the presiding deity! [No doubt a "shell game" legerdemain is practiced by the sly sacerdotal.—Ed.]

In the temple devoted to the worship of idols, food is placed before the gods; but I was told by a missionary that later the priests gather it up to eat it themselves. Paper prayers also are bought of the priest, a bell then is struck, to notify the unseen gods, and then the prayer is placed in a small oven and burned! I tried to

purchase the club used for striking the bell —wanting it as a curio—but they would not sell in, saying, "Chinaman come along." This shows that their faith is not in wooden, painted gods; their created, artistic idols merely serving as aids to the conception of an invisible god.

The demons are fond of marrying beautiful children, hence, the parents invent disgusting names for them, in hopes of misleading the tormentors. Boys are especially liable to injury at the hands of the devils, so, many parents dress them as girls.

The Chinese hold the human cadaver in such sacred respect that it has prevented them from dissecting the body and attaining the anatomical knowledge required for the practice of surgery; as a consequence, they have developed no system of surgery, not even the reduction of fractures. But at the present day there is some demand for scientific medicine and surgery as practiced in enlightened countries. The only surgery now attempted is a penalty for adultery, and the castration of eunuchs. In war, soldiers are supposed to treat their own wounds. A kind of medicated clay is moistened with chicken-blood and applied to fractured parts. Incantations are repeated, bamboo splints and bandages are applied, and the blood of another chicken is poured on. Into bullet wounds quicksilver is poured, to dissolve the lead bullet.

The first authority in medicine was Chen Long, who lived and wrote about 2737 B. C.

Here charms and magic are a part of the doctor's therapy. But he has "life-preserving pills," which he sells for a dollar each. Often a medicine is given solely because of its fancied reference, in some respect, to the diseased parts. For general debility, the bones of a tiger are pulverized and administered. Grasshoppers are dried, pulverized, and used as medicine. The dried and pulverized skin of the rattlesnake also is employed. For jaundice, the bile of the dog and the ox are prescribed.

If we visit a drugstore, we often find a signboard on which are written the names of many diseases. The patient is required to state his disease as best he can, whereupon the "proper" remedy is handed out.

For a patient in the throes of death, a rooster is killed, cut up, and the bleeding parts applied to the abdomen. Supposed to be a sure cure in "curable" cases.

In Kwantung Province, human blood is considered an excellent medicine, and at public executions people crowd around, that they may get some of the blood; which they catch up in small bottles for future use. In civil life, the doctor is called upon only in the more serious cases, home-treatment being relied upon to a great extent.

The "astronomy" of the body is given as follows, each organ personifying a planet: stomach, Saturn; liver, Jupiter; heart, Mars; lungs, Venus; kidneys, Mercury.

This ancient Chinese therapy, though, slowly is passing away and modern science is taking its place. The China Medical Board of the Rockefeller foundation announces that it is the intention to assist and carry on the modern institutions already established at Pekin and Shanghai and make these medical schools equal to any in the United States.

China is now on the edge of reform and advancement, both politically and in science. She never did imitate us in burning witches and reformers at the stake. Her opium-habit—which she is trying by law to abolish—is not doing more harm than is our alcohol drinking, tobacco eating, and smoking-mania as practiced by our self-lauding critics.

C. E. Witham.

Lawrence, Kans.

EMETINE IN CHRONIC BOWEL TROUBLE

Having read several articles in Clinical Medicine as to results from emetine and not having seen any like my own experience, I submit the following.

Case. White, male, age 49. History, anal fissure for about a year just previous to Spanish-American war. Cured. Enlisted in army; had typhoid fever, fall 1897, followed by recurrence of fissure, which yielded to caustic. Shortly after, severe dysentery developed which subsided after the patient sailed for America. He has however been bothered with obstinate constipation ever since, this being accompanied with intestinal indigestion. He had two attacks of appendicitis (1902-3) which were dispersed with calomel. Since then, his intestinal symptoms have been worse.

This patient had bleeding of the gums from pyorrhea. I gave him three daily doses of emetine with the result that the pyorrhea was much improved, greatly to my surprise. The bowels became regular,

and the intestinal distress disappeared. When these symptoms returned after some days, to a lesser degree, I gave him four ½-gr. doses at daily intervals. Now, two months since, he is a different man. Bowels regular and digestion nearly perfect.

The question in my mind is: Was the later stage chronic appendicitis? If so, was it possibly caused by the dysenteric germ? Might not emetine be used to advantage in many cases diagnosed as appendicitis? *I* would try it. C. S. FERRIS.

Fort Wayne, Ind.

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[The Doctor's suggestion is a good one, and, we submit it without comment. Let us hear from you, please, and let us discuss this very interesting problem.—ED.]

THE FLAG OF THE FREE

A Patriotic Song

By Dr. J. A. Cox, Wheeling, West Virginia

Oh, ye sons of Columbia, why thus repose
Whilst the Nation is menaced by oversea foes?
Then to arms! Then to arms! Volunteer! Volunteer!
Though the ties of old home be they ever so dear.
On the bed of the ocean your loved ones lie dead,
Without warning to slaughter were ruthlessly led.
To the colors then hasten, whatever befalls.
'Round the flag quickly rally, your country now calls!

To your duties, young men, with unwavering zeal;
For, to you is our future, for woe or for weal:
On, ye veterans, too, of past victories won,
We shall call for advice in the conflicts to come.
Late at peace with ourselves, late at peace with the world,
In the breezes didst wave our old banner unfurled:
Now a foe from without doth intrude and inveigh—
'Round the flag they will rally, the Blue and the Gray!

And our Germans, maligned and oft falsely accused,
Their true loyalty questioned, their friendship refused,
Having once from the Fatherland fled to be free,
Nevermore will consent in war-bondage to be.
To the Union they'll cling; for its honor they'll fight,
As "mit Sigel" they struggle for freedom and right.
To the Stars and the Stripes, of all ensigns the best,
'Round the flag they will rally, brave Germans, with zest!

And the Alien who cometh from far-distant lands,
Seeking home and protection, e'en wealth, at our hands,
Must be found by the side of our own native sons,
Uniformed and equipped with their sabers and guns.
For, all Aliens who shirk from their duty today
Should be banished at once—not a moment's delay.
Since to us you have come, oft oppressed and supine,
'Round the flag, Aliens rally; yes, fall into line!

For Democracy fighting, no spoils do we ask,
Hohenzollern o'erthrown, to end war, is our task;
Granting peace to the peoples in lands far away,
Forming bonds that grow stronger with each passing day.
From the carnage and strife, from the bloodshed and pain—
'Round the flag we'll then rally, in joy and regale!

CHORUS:

Let the young and the old, let the loyal and true
In one chorus unite for the Red, White, and Blue.
Then, hurrah for Old Glory, the flag of the brave,
As the emblem of peace, may she evermore wave!

In the World War

MAKING AN ARMY MEDICAL OFFICER

Thinking that your readers, our colleagues, may be interested in a brief description of the life of a medical-reserve officer in the process of making into an army officer, I will write you of my own experience.

We have here at Fort Riley (Kan.), about 1000 physicians, all volunteers—to their and the profession's everlasting credit. Daily a few are getting special assignments; and daily a few more are coming, which maintains the average.

We are quartered between 100 to 140 men in a bunkhouse, and we sleep on canvas cots arranged in two parallel rows on either side of the long wooden buildings. These bunkhouses are numbered consecutively, from 1 up.

The daily duties begin with "first call," on the bugle, at 5:15 in the morning. Fall in for roll-call at 5:30 a. m., shivering in the cool morning air under the light of a waning moon. Then back to our bunkhouse, straighten up our blankets, fold them regulation army way, roll up our mattress in three folds, place it at the foot of the cot, then the folded blankets on top of it, and our pillow on top of the blankets.

We just have time to wash up when mess-call is sounded at 6 a. m. They set a good table, charging us one dollar a day for our meals. We have eggs, bacon, breakfast food, fruit, toast, good butter, coffee. Canned milk is used in the coffee.

After breakfast, we have time for shaving and reading the morning paper till 7 o'clock. Then we fall in, in our undershirts and trousers and shoes, with leggings and puttees off, for twenty minutes of setting-up exercises; which may be vigorous or very vigorous, depending on the coolness of the morning.

This finished, we repair to the bunkhouse, put on our puttees and flannel shirts and fall in again, and march up to the top of one of the many hills surrounding the camp. This one here is 1240 feet above sea level. Here, we do military drill, marching, facings, learn how to salute, voice culture, and so forth, till 9:10 a. m.

Voice culture consists in yelling, at the top of our voices, commands, such as "Fours right, march!" "Column left march!" "Detachment halt!" following the commands of our instructors and under their critical observation.

Among the physicians, there are men who have had previous military training, also men who show a natural aptitude for the service. These are soon singled out and given small detachments to drill.

At 9:10, we assemble on the drill-ground, march back to the bunkhouses, grab a book or two, a notebook, a fountain-pen and meet at our airdome for the first hour's lecture.

The airdomes are natural depressions or gallies that surround the camp, and which have been fitted by cutting away some of the sides in almost circular form, and where we sit, as in a college amphitheater, among the trees and with the sky for roof. The instructor stands in the center at the bottom. Here, we have meted out to us in large doses: army regulations, manual of the medical department, military hygiene, poison gases used in modern warfare and how to combat them, care of the sick and wounded, the medical officer at the front, gunshot wounds, camp sanitation, flies, fleas, lice, mosquitoes and how to combat them, prophylaxis of venereal and other contagions and infections, the physician's duties at the front, army-paper work, drill regulations, and so forth.

The instructors are regular army officers or reserve officers who by their experience or travel are qualified to teach. The instructors are a wholesouled lot and give us the best they have in them. However, they are working under very high pressure coming from the man above, who has the "superman" task of giving us a two- or

three-years' course in three months, so that not a minute is wasted, and often from 30 to 50 pages of a book must be read over for the next lesson. At 10:20, this first lecture is over and a few minutes' recess is allowed for stretching our limbs, when we plunge into another hour's lecture or quiz under another instructor, who comes in as the first one goes out, like actors on the stage. At 11:20, we finish for the morning. Then there is nothing to do until noon, which gives us time to wash our body-garments.

It is interesting to see how quickly man adapts himself to his surroundings. This is aptly illustrated by seeing a formally

At home, two very distinguished physicians; in camp, rookies like the rest.

dignified physician with a good-sized practice, when in civil life, washing his clothes. Not that we have to, for laundry-agents are everlastingly around soliciting, but, for the convenience. Things are washed, dried, and ready to put on in half a day.

Next, noon mess is served. Each company has its own mess-hall, with long wooden tables without table-linen, and wooden benches for seats. However, living out of doors virtually all the time (for, at night our screened windows and doors are wide open), gives one a healthy appetite. But, we always get enough to satisfy our hunger.

At 1:20, we assemble in our airdome for another lecture, followed at 2:20 by yet another one. At 3:30, we fall in—without books this time—for equitation. Equitation consists in one and one-half hours' hike over the hills. To relieve the monotony, we get a few hundred yards of double time every now and then. This, by the way, is a strong rival of pilocarpine. Every few days, a man of goodly paunch has to pull his belt up a notch. The purpose of the hikes is, to toughen the men, and it works like a charm, though at first it seems brutal therapeutics. Still, a few weeks of it brightens the eyes, reduces the girth, and hardens the loins and legs, and it is surprising how much better one's wind is.

At 5 o'clock, we return, and then the blessed solace of a shower-bath, each company being provided with at least six showers. Now into clean linen, and then, when mess is ready at 6 p. m., what a job we make of "table finishing." A pile of biscuits or a platter of meat just melts away, before the onslaught, like the proverbial snowball in a hot place.

After supper, do we just loaf and smoke? Oh, no! Two hours of study period, to prepare for the morrow's quizzes. From 7 to 8, three nights a week, is devoted to learning French. Taps at 10 o'clock means "lights out," and mercifully closes the day. Needless to say, cases of insomnia are as rare as hen's teeth.

After a month of the hikes, we are presumed to be fairly well hardened. Then drawing maps of the surrounding country, sanitary inspections of the neighboring camps of artillery and cavalry and horseback riding, practical work taking charge of a field-hospital or ambulance drill, and taking charge of an ambulance company is welcome diversion.

It would be hard to recognize the spectacled, dignified, portly physicians that came into the camp on their first day to report for duty in the clear-eyed, clear-skinned, tanned, slim-waisted, flannel-shirted men that they soon become. If it were put to a vote, however, I'll venture to say that, out of the thousand men, less than one per-cent would go back and leave their self-imposed tasks undone.

We have all been physically examined, vaccinated, and given typhoid and paratyphoid inoculations. The camp is a living example of clean-living men, who are willing "to do their bit." Godspeed to all of them.

ROBERT C. MURPHY,
Fort Riley, Kan. *First Lieut. M. O. R. C.*

The Saturday inspection at Fort Riley, Kansas.

EXEMPTION-BOARD EXPERIENCE IN MISSOURI

Last month I wrote an article for CLINICAL MEDICINE, but, since it was lost, as you say in your October issue (page 771), I will give a more complete record of our draft-work examination.

The accompanying table shows the records of 118 men who were exempted from army service by the Brenton County, Missouri, Exemption-Board. Of this number several individuals had three defects, any one of them sufficient to bar them. Some had two and most of them only one critical defect.

Aside from these 118 defective ones, out of a total of 448 men examined, more than 200 were exempted for the sake of dependents or on account of industrial claims. All the others have gone into service, or, our proportion of the quota of 104 required of us.

In the table of causes for rejection, I classified these only collectively. The 28 first on the list include ankylosed knee-, elbow-, hip-, wrist-, and ankle-joints from nervous causes, and fractures, inflamed joints, and so forth. Great variances were shown according to our table in under and over weight. Overexcitable heart represents that class whose heart beats were 100 or more at rest and 150 to 190 at exercise (hopping forth and back across the 24-foot room).

Defective teeth, 8, includes only those beyond use; but, fully 50 percent of the rest should have more or less dental work done.

Completely deficient includes those who were of no use at home as for work.

The first 208 were examined August 6, 7, and 8 by Dr. Jas. A. Logan (now in the Medical Reserve Corps) and myself. There not being half enough who passed to make up our quota, the second call of 240 was made—80 a day to be examined, on August 20, 21, and 22.

In the meantime, Doctor Logan received his orders to go to Fort Riley; so, the best man was gone and I was strictly "up against it," so to speak. I tried to get one doctor to help me, but, he said there was nothing in it for him and he couldn't waste his time working for nothing. Dr. H. G. Savage of our city consented to make the

examinations of those who failed, and, in the end, I was left to do the whole thing myself.

Let me ask one question: How many of you doctors can examine 80 each day during the ten hours of 7 to 12 a. m. and 1 to 6 p m., for three consecutive days? All thought I should be buried alive, so to speak; however, I still live, ready for the next siege—and no man had to wait longer for examination than his specified hour. In sending out the call to the boys, I had designated the exact hour for every man of

Setting-up exercises. They are fine for getting the sleep out of your eyes.

the entire 240 to be present, 8 for each hour and ten hours each day.

If any of you think one man for that work has much time to loiter, let him try it out. One doctor in one of our neighboring towns said that no doctor could make anything like a thorough examination at that rate, but, the work speaks for itself. None of our boys have been sent back for lack of careful examination, and the ones discharged certainly were examined carefully, as the second examiner had only 15 or 20 to examine a day, while I had 80; and the only help I had was a good secretary to fill in the blanks. I did *all* the weighing and measuring; I examined every ear, nose, throat, and all the teeth; I tested every eye; and I ran over every applicant carefully, albeit quickly, noting every deformity, even to clubbed fingers, webbed toes, and modules on the head. It was strenuous work.

This letter is not intended either as a bluff or to brag, but, simply to show what *can* be done, if it must be done. I had these men ordered in, and I was bound to make good, and to meet each man at his specified time—and this was done to the minute.

The causes for exemption are tabulated below:

Old injuries and deformities	28
Defective eye-sight	18
Heart disease	14
Hernia	12
Under weight	11
Over-excitable Heart	9
Varicocele	8
Deficient teeth	8
Spinal curvature	8
Completely deficient	7
Mentally deficient	5
Flat foot	4
Deformed chest	4
Varicose veins	4
Catarrh of ears	4
Catarrh of nose (ozena)	4
Flat chested	3
Hearing deficient	3
Lungs deficient	3
Enlarged tonsils	3
Hydrocele	2
Epilepsy	2
Kidney trouble, Brights Disease	2
Ruptured ear drum	2
Asthma	2
No testicle	2
One testicle	1
Loss of smell and taste	1
Prolapse of rectum	1
Soft palate absent	1
Syphilis	1
Chorea, aggravated	1
One eye	1
Overweight	6
Nearly blind	1

MISSOURI.

FOOD WASTE AT FORT SHERIDAN

The following letter appeared in *The Chicago Tribune*: The other day at Fort Sheridan I noticed quite a quantity of bread burning in the waste disposal pit. I remarked to the officer accompanying me that such a waste of food is a crime at the present time. To my statement he replied, "It surely is and it is a daily occurrence here," and he further remarked, "I have never seen so much waste in all my life as I have since coming here." Bread when stale can be made into pancakes, bread pudding, and so forth, and in this form of diet is just as nutritious as is fresh bread, and certainly the soldiers would enjoy it as a dessert

From another source I have learned that whole pies are thrown out and burned in the same manner. From this it would look as if the problem of conserving food does not rest entirely with the farmer and house-

holders. This source of waste should be carefully looked into.

CHARLES J. WHALEN.

Chicago, Ill.

[Doctor Whalen's letter shows that the disposal of waste is not yet ideal in all our camps. But we are "getting there" rapidly. It is a good thing to point out the weak spots which still remain.—ED.]

GARBAGE SALVAGE IN THE CANTONMENTS

We learn from the *Official Bulletin* published by the United States Government that the United States Army, through its food-administration department, is making plans for conserving all of the waste material in the National Army camps, and it is expected that thousands of dollars will be saved in this manner.

The Army's first consideration in planning this work has been the sanitary and hygienic problem. At each cantonment the wastes will be collected and transported to a single "transfer station" under the direction of the sanitary inspector. Through the use of the two-can system, wastes will be tightly inclosed throughout their collection. Sterilized cans will be substituted for the filled cans at the kitchens, the nuisance of disagreeable odors and danger from flies being reduced to a minimum. Every step in the process of reclamation and utilization is carefully safeguarded and is under the absolute direction of a sanitary force, each contractor being placed under heavy bonds.

At the transfer station, the wastes are turned over to a contractor, who will remove them to a point at least 3 miles distant from the reservation. There the wastes will be completely sorted. Bottles will be sterilized and sold for commercial use. Tin cans will be baled and the solder, tin, and iron reclaimed. Paper, which is estimated at about 5 tons per day, will be baled. Bones will be kept separate and ground for fertilizer. The hides of dead animals will be removed and the carcasses "reduced" for grease and fertilizer. In short, nothing of possible use is discarded.

The chief items of waste will be the garbage and the manure. It is estimated that there are 1,200 animals at each cantonment, producing 120 tons of manure per day. At the date of the report the manure from 11 cantonments had been sold for $240,900 annually.

The greatest element of saving is through the garbage. This has been sold for an annual price of $446,394.50. The garbage from 13 of the cantonments will be used for feeding swine. It is estimated, on the basis of experiments conducted at the Chillicothe cantonment, that the garbage waste from 10 to 15 men will feed one hog and enable it to add to its weight 1 pound per day. At this rate, the garbage from these 13 cantonments will produce 18,980,000 pounds of pork per year.

When not used for feeding, the garbage will be "reduced," that is, cooked at high temperature, the grease extracted, and the remainder ground and used for fertilizer or feeds.

The daily hike—the doctors like it, after awhile.

By the method of incineration formerly in use, not only would all these valuable waste materials have been destroyed, but, it would have cost approximately $700,000 for the installation of incinerator plants, and an annual charge of approximately $595,000 for their operation. When we add to this saving the amount annually received by the Government from these wastes, the net saving the first year amounts to $1,707,840.

The effect of this new plan, therefore, not only is to conserve large quantities of valuable food wastes, fertilizers, and so forth, but, to turn into a large profit what has hitherto been a very considerable expense

THE PATRIOTIC LEAGUE.

Some of us living in the Twenty-sixth Ward in the City of Chicago are forming an organization to be known as The Patriotic League, the purpose of which is

to create and maintain a central body of the citizens of this ward for the purpose of rendering assistance in the prosecution of the war through keeping in touch with our men and women in active service and promoting their welfare and happiness giving necessary aid and comfort to the families of our soldiers and sailors; by helping in the organization and equipment of our home guard units; by encouraging and stimulating enlistment in active service in the war; by holding public patriotic meetings; by cooperating in Red Cross work; by assisting in the flotation of the Liberty Loans; and in any other way which seems likely to contribute to the speedy success of American arms.

Among those who are taking an active part in the organization of the League are our two aldermen, the executive officers of the republican and democratic ward organizations, the presidents of the banks, the leaders in the various business men's associations, clubs, churches, fraternal societies, and the like.

With a total population of more than 100,000 to draw upon, we expect to be able to secure from 5000 to 10,000 members at least, and we hope for a good many more. Membership in the organization is open to men, women and children of all ages, and the fees are adjusted to suit everybody. It is our purpose to open headquarters, in charge of competent men and women. We are cooperating with the exemption boards; and we hope soon to have a complete, detailed card index of every man or woman from this ward who is enlisted in any branch of the military service. We include the women because they too are doing their bit as Red Cross nurses and in hospital service.

No doubt your community is doing similar work. The writer would like to hear from as many of you as possible. We of this community are anxious to make our work just as effective as we possibly can, and, therefore, the writer will be very glad to know how you are handling this work in your community; also, he will take great pleasure in sending any reader of CLINICAL MEDICINE copy of the by-laws and other information concerning The Patriotic League of the Twenty-sixth Ward. If you are thinking of forming a similar organization, possibly our experience may be of service to you. If so, we shall be happy to pass it along to you freely. We believe that a chain of Patriotic Leagues, established in all parts of the country and linked together by some kind of central organization would prove a very good thing indeed.

If the matter interests you, let us hear from you. Let us all work together as far as we possibly can to bring the great task in which we are engaged to a speedy consummation. To do this we need the united support and the hearty cooperation of every man, woman, and child in the country.

ALFRED S. BURDICK.
4739 Ravenswood Ave., Chicago.

EXTRA CANTONMENT ZONE REGULATIONS

Public Health Reports for August 10 reproduces a set of regulations adopted by the state board of health of Arkansas, and which governs the sale of food and drink in the special sanitary zone around Camp Pike, near Little Rock, Arkansas. These regulations are excellent in their scope, and it is to be hoped that similar ones will be enforced in the case of all cantonments where soldiers are trained for service.

The Camp Pike regulations establish a sanitary zone around the cantonments, in which are comprised all places of business within five miles of the training-camp. They provide that "no person shall engage in the business of restaurant, hotel, lunch-counter, grocery, delicatessen, fruit-store, icecream-parlor, refreshment-stand, push-cart, wagon or any place where food or food products are stored, prepared, handled, sold, exchanged, offered for sale, given away or intended for human consumption without first obtaining a permit"; while those persons already engaged in such business are required to procure a permit for continuing their business.

All persons engaged in business such as described, including lodging-house, rooming-house, and public inn, and the like, must possess a certificate from a regular licensed and practicing physician, certifying that the person so employed has been examined within the last thirty days and at that time was free from any contagious, infectious or communicable disease. Persons are not permitted to engage in such business who were or are exposed to communicable dis-

eases. Furthermore, all persons engaged in such business must be vaccinated against typhoid fever and smallpox in a manner approved by the state health-officer.

Detailed regulations are given providing that the food and foodstuffs handled in the establishments mentioned must be clean, pure, wholesome, and suitable for human consumption. The premises must be maintained in a clean and sanitary condition, well lighted and ventilated, free from vermin, foul odors, dust, dirt, accumulation of wastes, and refuse of every kind. It is further provided that the foodstuffs offered for sale shall be covered by some permanent means and adequately protected from flies, dirt, dust, and contamination; likewise, the utensils employed in the preparation, service, and sale of these substances must be properly cleansed after being used, and may not be used a second time without being previously cleaned.

All these establishments must provide privies that are amply illuminated, ventilated, properly screened, and located at a proper distance from the place of business. There must be ample washing-facilities for the use of the employees, and must be maintained in clean, sanitary condition. Receptacles for garbage, refuse, and waste must be provided, and the water supply for all these places of business is required to be unobjectionable.

The extra cantonment zone regulations governing the sale of foodstuffs in the zone around Camp Dix, at Wrightstown, New Jersey (*loc. cit.*, Sept. 21, p. 1505), contain the important clause that permits may be revoked for any violation of any of the provisions of the existing state laws or of regulations of the state sanitary code or of the state department of health.

A GOOD PLACE TO AVOID

My friend, have you heard of the town Nogood,
On the banks of the river Slow;
Where the Sometime-or-other fills the air
And the soft Go-easys grow?
It lies in the valley of What's-the-use,
In the province of Let-her-slide;
It's the home of the reckless I-don't-care,
Where the Give-it-ups abide.
The town is as old as the human race,
And it grows with the light of years;
It is wrapped in the fog of the idler's dreams;
Its streets are all paved with discarded schemes
And are sprinkled with useless tears.

"Public Health," Lansing, Mich.

Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

[*Continued from October issue, page 776*]

IN July, I visited Concord, I saw the house in which Thoreau lived and died, I stood by his grave in Sleepy Hollow Cemetery. I thought, where could there be a more fitting grave for this immortal? In winter, his fame is rehearsed in the whisperings of the pines above and chanted by the woodbirds singing in the leafy wilderness in summer. It seemed to me one could not find a more tranquil resting-place. Every spring fresh blossoms deck his grave, summer winds caress, while o'er him autumn softly spreads the mantle of its varied loneliness and winter enfolds him in its spotless shroud.

In imagination, my mind went back to his last remaining days on earth. I could see him sitting in the little parlor of his unpretentious dwelling, succumbing to every breath of ungentle air, though it seemed but the parting kiss of nature or the fond greeting that was to take him to her breast forever. His lustrous eyes were fixed calmly on the river and the meadows before him, every picture of which had been to him from early manhood so tranquil a delight. He spoke little, but, his voice was soft and musical, and his face, though pale and wasted, reflected the serenity of his unreproaching meditations. Yes, unreproaching they were, and I know of no more impressive proof of this than his noble answer to a solicitous relative, who, asking, "Henry, have you made your peace with God?" received the eloquent reply: "Why, aunty, dear, I didn't know we'd ever quarreled." And, they never had! How truly had he written: "My greatest skill has been to want but little. For joy, I could embrace the earth. I shall delight to be buried in it. And then I think of those among men who will know that I loved them, though I tell them not."

How silent was nature! Still, all, I know, was well with him; for, had he not rounded noble days with whatsoever was most beautiful in human thought and action?

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I reflected upon what I had known of Thoreau; how essentially good and chaste and true had been the years of that sunlight pilgrimage; how poor beside his own seemed the achievement of so many others; how shallow the petty conceits and ambitions of many a character upon which the world has bestowed position and honor, compared with the simple grandeur of a life like his! How easy, yet, how difficult! to be loyal as he had been, disdaining subterfuge and sophistry, that not a ray of light breaking from the soul should be obscured by the semblance of untruth.

I pictured to myself the loving regret of townsmen, the glad tribute which coming generations would hasten to accord to his departed memory, while he, dreaming upon the bosom of nature or treading the aisles of the unknown land, would smile sweetly upon their tardy homage. I thought how the scholar and the husbandman would one day alike find solace and enjoyment in his pages, so freighted with earnestness and hope, and how that constant, affectionate plea for the woodlands would, like the fading miracle of day, "cheer and reassure the latest child that walked there." And, in my imagination, seeing him seated in the solitude and stillness of his final hour among men and looking into the gates of his purple evening with the same calm confidence and love that had molded his early thoughts, it seemed as if his own lay, "A Fancy," might then be welling from his patient, brave, and faithful heart:

—

"Some tender buds were left upon my stem
In mimicry of life,
But, ah! the children will not know,
Till time has withered them,
The woe
With which they're rife.

But, now I see I was not plucked for naught,
And after, in Life's vase
Of glass set, while I might survive,
But, by a kind hand brought
Alive
To a strange place.

The stock thus thinned will soon redeem
its hours,
And, by another year,
Such as God knows, with freer air,
More fruits and fairer flowers
Will bear
While I drop here."

"It's a long, long way" from Thoreau to the Brownings, and even longer from present-day free verse, such as "Spoon River Anthology" and "Three Deaths in the Bronx". Yet, apparently, the majority of the people prefer the grotesque, the so-called "up-to-date" stuff, to the classics. As I have said before, I am "green". I can not, for the life of me, get interested in the popular alleged poetry or the average modern novel—neither can I say that I am pleased with cubist art or Charlie Chaplin. I prefer people who think and literature that makes you think. If an acquaintance of mine should betray a liking for the modern society-novel—written to be read without reflection, exactly as a procession or masquerade is viewed, and in which one has only the slightest interest—I could not help losing respect for him. I do not expect a friend to be a Solomon in wisdom, an Emerson in taste, an angel in virtue—I should be unfit for him, if he were. As to angels, they are fancies. But, to read without reflection! This I can not understand. Goethe said he had been engaged for eighteen years trying to learn the art of reading, and had not attained it. Richter, speaking for miscellaneous reading, inquiries, quaintly: "Does more depend upon the order in which the meats follow each other or upon the digestion of them?"

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"It would be worth while," said Thoreau, "to select our reading, for, books are the society we keep; to read only the serenely true; never statistics, nor fiction, nor news, nor reports, nor periodicals, but, only great poems. Read the best books first, or you may not have a chance to read them at all." Perhaps, if men read aright, they would never read anything but poems; for, poetry is the mysticism and the condensed wisdom of mankind. "The expressions of the poet cannot be analysed," says Thoreau again, "his sentence is one word whose syllables are words. There are, indeed, no words quite worthy to be set to his music. But, what matter if we do not hear the words always, if we hear the music? Much verse fails of being poetry, because it was not written exactly at the right crisis, though it may have been inconceivably near to it. It is only by a miracle that poetry is written at all. It is not recoverable thought, but, a hue caught from a vaster receding thought. A poem is one undivided, unimpeded expression fallen ripe into literature, and it is undividedly and impededly received by those for whom it was matured."

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Robert Browning's poems are more difficult of analysis, perhaps, than are those of any other modern poet. Burns, doubtless, is the one immortal bard of humanity—to be cherished and sung while man is man, ever and ever. But, because, like Thoreau, Browning is less read and understood than many other poets; and principally, because, while puzzled over much of his poetry, I am very fond of the poetry of both the Brownings: I shall write about them today.

It is quite possible that an allopathic dose of medicine given to young Robert was the beginning of his poetical career. If alkaloidal granules and "candy" medicine had been administered in those days, we might not have had any of Browning's poetry. His mother cherished his first couplet, which was made in consequence of his being ordered by the family physician—a Doctor Bean, of Camberwell—to take a strong dose of rhubarb and magnesia. Finding resistance and remonstrance useless, Browning, then only four years old, took the odious bowl from his mother and, saying in a mock heroic voice,

Good people, if you wish to see,
A boy take physic, look at me,

drained the cup to its dregs. When Jerrold heard this anecdote, he declared, with great gravity, that this was the only intelligible verse Browning had ever written.

As soon as Robert could run alone, he began to climb Parnassus, and he almost began his ABC's by making the letters rhyme. In his eighth year, he had translated several Odes of Horace. Incredible as it may appear, even these juvenile pro-

ductions foreshadowed that quaintness and obscurity of style that have rendered him so unpopular with the masses.

In his eighteenth year, he wrote "Pauline: A Fragment of a Confession", an autobiographical poem of about three thousand lines. It contains an exact description of his own feelings when under the influence of his first love, which had been awakened by a young lady considerably his senior. Browning revealed in this poem much of his own nature—he made it subjective instead of objective. It has less of the poet's peculiar style than anything he wrote. It abounds in fine passages, yet, is noteworthy psychologically, rather than poetically. There are a few passages in the poem, however, that appeal to me strongly:

I am made up of an intensest life
——a principle of restlessness
Which would be all, have, see, know, taste, feel, all—
This is myself; and I should thus have been
Though gifted lower than the meanest soul.
My selfishness is satiated not.
It wears me like a flame; my hunger for
All pleasure, howsoe'er minute, grows pain.
O God, where do they tend—the struggling aims?
What would I have? What is this "sleep" which seems
To bound all? can there be a waking point
Of crowning life? The soul would never rule:
It would be first in all things, it would have
Its utmost pleasure filled: but, that complete,
Commanding, for commanding, sickens it.
The last point I can trace is—rest beneath
Some better essence than itself, in weakness:
This is "myself", not what I think should be;
And, what is that I hunger for but God?

—

Some two or three years later, he published "Paracelsus", a poem of great power and originality, one which should especially appeal to physicians; for, he took as his theme the life of the sixteenth-century so-called quack; the physician who introduced mercury into medicine; astrologist, alchemist, conjuror—"compound of Faust and Cagliostro, mixture of truthseeker, charlatan, and dreamer."

I repeat, this poem should be read and pondered by physicians, especially those illiberal ones who can see nothing of value in any theory or method differing from their own; for, "Paracelsus" was written to show how unjust the world is in its judgments and how ignorantly it decides upon the aims and objects of men. Browning maintained, and no doubt correctly, that, as out of superstition came true religion—being, as it were, the rough grope of a soul in the dark—so out of astrology came astronomy, and from alchemy sprung chemistry. "Men are probably nearer to the essential truth in their superstitions than in their science" says Thoreau. Browning, therefore, considered Albertus Magnus, Paracelsus, and others who by the vulgar were considered magicians and quacks by the educated, as among the greatest benefactors of the race.

There is no doubt that the wild-goose chase after the philosopher's stone led to the discovery of many a gem of chemical research, and that in the various attempts to compound the *elixir vitæ* many life-saving and health-restoring remedies have been found. It was in this light that Browning regarded the famous Paracelsus, and it is, perhaps, unfortunate (although I do not think so) that he would not sacrifice his own originality to that prejudice, which the world has, in favor of having everything made as intelligible as possible. The majority of people will not read what has to be explained. They require these days that the sublimest thoughts be made to flash their meaning as though they were jokes, the point of which must be felt immediately. They are like boys who are too idle to crack the nuts the generous donor plucks from the tree and crowds into their laps. Like monkeys, they want to have their chestnuts roasted and taken out of the fire for their idle and sensual jaws, careless whether the poet burns his fingers or not in the experiment.

The close of the first act of "Paracelsus" has a simile which I think equal to any in our language. It is the words in which the great alchemist announces his determination to risk everything to ascertain the great secrets of human knowledge:

There are two moments in a diver's life—
One, when a beggar, he prepares to plunge;
And, when a prince, he rises with his pearl!
Festus, I plunge!

"Browning makes of 'Paracelsus' the history of the soul of a feverish aspirant after the finality of intellectual power", says Burlingame, "the knowledge which should be for man the key to the universe; the tragedy of its failure, and the greater tragedy of its discovery of the barrenness of the effort, and the omission, from the

scheme of life, of an element without which power was impotent."

Yet, constituted thus, and thus endowed,
I failed; I gazed on power till I grew blind.
Power—I could not take my eyes from that;
That only I thought should be preserved, increased.

I learned my own deep error; love's undoing
Taught me the worth of love in man's estate,
And what proportion love should hold with power,
In his right constitution; love preceding
Power, and with much power always much more love.

—

I must confess that I do not admire his next poem, "Sordello", as much as I do some of the others; I don't understand all of it, probably because I am not as conversant with the medieval history of Italy as I should be. The author's intent was, I know, to give the inner life of an Italian poet who regards everything as part of a great work of art that only poets can understand. When I first read it, its ambiguity, obscurity, darkened sublimity or whatever else it may be called, discouraged and, I might add, disgusted me. Others, I know, have had a similar experience. Jerrold, when he read the first page cried out that he had lost his wits; and Horne declared, after reading part of it, that he felt like the fag end of a London mob.

Mr. E. L. Burlingame says of it: "With its inexhaustible wealth of psychological suggestion, its interwoven discussion of the most complex problems of life and thought, its metaphysical speculation, it may well give pause to the reader who makes his first approach to Browning through it and send him back if he begins, as is likely, with the feeling of one challenged to an intellectual task—baffled by the intricacy of its ways and without a comprehension of what it contains or leads to."

Because of this feeling, I read and reread the poem many times, understanding it better at each reading and discovering more and more of beauty in it; for, despite its tortuous diction and recondite thought, it has passages of marvelous beauty. However, in these days of automobiles and aeroplanes, the masses will not take the time nor trouble to learn a new poetical language, to read a single poet; for, much of his poetry is obscure and as a new language to many. His thoughts often would "break through language and escape." It, therefore, requires a knowledge of his poetical calendar, as it were, before he can be understood, and, as few people nowadays will take the trouble, the works of one of our most learned and original minds are sealed books to the majority of people.

It is doubtful whether the masses will ever understand and appreciate him; still, I am sure that his fame will increase as time goes on, although the actual knowledge of his writings will remain the possession of the few.

"A Blot in the 'Scutcheon" is one of the most pathetic tragedies in the English language. It is, undoubtedly, Mr. Browning's masterpiece in the drama. It is a mournful comment upon how often the forgiveness of Heaven is thwarted by the blindness and pride of man. It is a touching appeal from the world to that Mercy which weighs temptation and motive against the sin.

Among the most exquisite of his dramatic lyrics, is, I consider, the one entitled "How They Brought the Good News from Ghent to Aix." This lyric is not as smooth as an asphalt pavement, but, is a causeway fit for a giant's tread. "The Pied Piper of Hamelin" is a specimen simply of his grotesque riming, and never was intended by the poet as a specimen of humor. It was written to please an adolescent boy, Macready's eldest son, when he was only nine years old.

Many of his lyrics, such as "Bells and Pomegranates", "Men and Women", and, notably, those in "Pippa Passes", sing themselves. The title "Bells and Pomegranates" is taken from a verse in the Bible, in which Aaron's roses are alluded to, and where the expression occurs. The poet's idea was, simply to call attention to what he was going to offer to the public—the bells to announce his presence, with pomegranates for his guests. The notion is quaint, elegant, erudite, and obscure, like all that he did. Even his terms are mysteries that require a high priest to expound. As Byron said of another poet:

And Coleridge has explained to all the nation—
I wish he would explain his explanation.

[To be continued]

Among the Books

REPORT OF THE HENRY PHIPPS INSTITUTE

The thirteenth report of the Henry Phipps institute for the study, treatment, and prevention of tuberculosis contains 11 papers contributed by staff-members of the Institute, these dealing largely with the theoretical side of the study of tuberculosis; the only "practical" article among these being the first one, dealing with the diet for dispensary-patients. That does not mean, though, that this report is not adapted for practitioners; indeed, the reverse is true, and a careful study of all papers in this pamphlet will aid in clearing up many difficult problems arising in the practical management of clinical cases. The report is published by the Henry Phipps Institute, Seventh and Lombard Streets, Philadelphia.

"OCCUPATIONAL DISEASES"

Medicine and Surgery. Philip Skrainka, M. D., editor. September, 1917. Published monthly at $3.00 per year, or 30 cents a copy. The Medicine and Surgery Publishing Company, Metropolitan Building, St. Louis, Mo. Special number, devoted to the occupational diseases.

As was announced last month in this department, the September issue of *Medicine and Surgery* is devoted entirely to articles dealing with occupational diseases. In perusing the various contributions, covering 126 pages of text, with a view to discussing this special number, the Reviewer is confronted by a problem that has obtruded itself ofttimes in the past, namely, What is the purpose and, therefore, what is the proper scope of book reviews in a journal such as CLINICAL MEDICINE. If the object is merely to call the attention of the reader to new publications on given subjects, it suffices to announce them; possibly, with some remarks that may be commendatory or the reverse. If, however, it is expected that each new publication be critically examined and its merits or demerits, as well as the thoroughness or otherwise with which the subject has been handled, be determined and set forth, then it is to be feared that only one or two new books could be actually reviewed in the space assigned to this department. Moreover, the logical outcome of this latter procedure would be that the review-books were assigned to specialists in the respective departments. Theoretically, of course, this would be very desirable; practically, it is not always feasible.

Reverting to our subject, however, general practitioners, such as are most of the readers of CLINICAL MEDICINE, or theorists, as this Reviewer confesses himself to be, must fully appreciate the value of any good publication devoted to the discussion of occupational diseases. While the first systematic treatise on diseases of occupation was published as long ago as in 1700, having been written by Professor Ramazzini, of the University of Padua, Italy, deliberate and detailed investigations into maladies that may be classed, directly or indirectly, as being referable to harm suffered by a workman in the course of his daily occupation, have taken their inception only within the limits of one generation, and were taken up seriously in this country only during the present century. Nevertheless, once undertaken, these new studies were followed up with an intensity and an earnestness of purpose that has come to be characteristic of modern investigators, and it is being realized more fully than ever before that class distinction can not be enforced when the interests of both, employer and employee, and also those of the commonwealth are at stake. The truth is, that the greatest welfare of the employee must accrue to the benefit of the employer; and as a happy fact, the latter at last has come to appreciate that careful attention paid to the safety, comfort, and contentment of his workmen will result in increased dividends for himself.

This and many other thoughts are the natural outcome of studying articles such as those contributed to the September number of *Medicine and Surgery*. It would serve no good purpose to take up these articles individually; that should be done by the reading physicians, who must, necessarily, be interested in the subject, inasmuch as occupation is of signal moment in the causation of so many diseases and disorders that he has to deal with, as well as in the progress of the same. The Reviewer would urge every physician to procure a copy of this number, and to be sure to study it with care.

SOME LABORATORY GUIDES AND AIDS IN DIAGNOSIS

"Practical Uranalysis." By B. G. R. Williams, M. D. Illustrated. St. Louis: The C. V. Mosby Company. 1916. Price $1.25.

Doctor Williams, who is well known to readers of CLINICAL MEDICINE, points out in the preface to this little volume that the most valuable uranalyses are not those for casts, blood, and pus, but, those for the minor products of erroneous metabolism and excretion—proofs of disturbed function and its nature in certain tissues, organs, and systems, at a time when remedial measures may yet avail. His manual is presented as a guide in those diagnostic problems likely to be encountered from day to day.

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"Clinical and Laboratory Technic." By H. L. McNeil, A. B., M. D. Illustrated. St. Louis: The C. V. Mosby Company. 1916. Price $1.00

A successful medical diagnosis is reached best and most accurately by the systematic and scientific application of three different forms of examination, each of which being of equal importance from a clinical point of view. These three are: History taking, physical diagnosis, and laboratory analysis. And, their proper application associated by the ability to weigh and interpret any abnormal findings, differentiates the good, the mediocre, and the incompetent practitioners. It has been the aim of the author to describe these three important forms of examination clearly and in a practical manner.

"Animal Micrology": Practical Exercises in Zoological Microtechnic. By Michael F. Guyer, Ph.D. With a Chapter on Drawing, by Elizabeth A. Smith, Ph.D. Revised edition. Chicago: The University of Chicago Press. 1917. Price $2.00, net.

While not directly concerning itself with the diagnosis of disease, this volume may be of decided indirect assistance, for the reason that it constitutes a reliable guide for the acquirement of an efficient laboratory technic in microscopy and also in the preparation of pathological specimens for examination. In addition to this, it may well be recommended to those physicians who are especially interested in the subject, as a "hobby", in aiding them in their work.

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"The Newer Methods of Blood and Urine Chemistry." By R. B. H. Gradwohl, M. D., and A. J. Blavais. With 65 illustrations and 4 colored plates. St. Louis: The C. V. Mosby Company. 1917. Price $2.50.

The text of this book is divided into three parts of fairly equal length, namely, part 1, discussing the technic of blood-chemistry; part 2, dealing with the chemical analysis of urine; and—of very great importance for the practitioner—part 3, devoted to the interpretation of blood-findings. The available knowledge as to the chemistry of the blood is subject to so rapid a process of evolution and progress that it is possible only to mirror the present state of our views and acquirements. However, our thanks are due to the authors for having collected the major part of the information that is scattered so widely throughout the journal literature of the past years and condensing it into a readily assimilable form. The Reviewer is impressed particularly with the great assistance which a careful examination of the third part of this book may render to the practitioner in the study of his cases.

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"Manual of Physical Diagnosis." By Austin Flint, M. D., LL.D. Seventh edition, revised by Henry C. Thacher, M. S., M. D. Illustrated. Philadelphia: Lea & Febiger. 1917. Price $2.50.

While this volume is in no way a laboratory-guide, but deals entirely with physical diagnosis, its announcement has been added to the preceding series of guides as

an anticlimax, as it were, in order to emphasize the necessity, referred to in the announcement of McNeils' book, of coordinating physical diagnosis with laboratory examination. Austin Flint's treatise on physical diagnosis has been in constant and general use among physicians for many years. The present revision utilizes the results of recent progress; especially as regards our knowledge of cardiac diseases, the chapters devoted to examination of the heart having been brought into accord with modern ideas. "Flint's Physical Diagnosis" will thus continue to serve as a reliable guide and mentor to the student and practitioner.

"PROGRESSIVE MEDICINE"

Progressive Medicine. A quarterly digest of advances, discoveries, and improvements in the medical and surgical sciences. Edited by Hobart Amory Hare, M. D., assisted by Leighton F. Appleman, M. D. Philadelphia: Lea & Febiger, September, 1917. Price $6.00 per annum.

As is usual, the present number of "Progressive Medicine" contains a wealth of useful information compiled from current literature. There are discussed in it common and uncommon subjects, of which we may cite, offhand, paragraphs on the Bárány tests in brain lesions, and on magnesium sulphate in tetanus. An interesting discussion is that on birth-control (page 216), in which the regulation and settlement of this problem, as also the supervision and operation of any actual control, is claimed—very properly so—for the medical profession. The remarks on the subject are commendably sensible and free from any hysterical vagary.

THOMA: "ORAL ABSCESSES"

Oral Abscesses. By Kurt H. Thoma, D. M. D. Boston: Ritter & Co. 1916. Price $4.50.

"This volume has been written with a view to establishing a correct relationship between the condition of the oral cavity and the health of the patient, and also in the hope that a clear presentation may lead to a more general understanding of this new field," we read in the foreword. Undoubtedly, it is of interest to the physician fully as much as to the dentist, since the importance of focal infection, so called, has come to the realization of the former, especially through the beautiful researches of Rosenow. Assuredly, physicians will find in it much that will aid them in the recognition of obscure disease-conditions.

JORDAN: "GENERAL BACTERIOLOGY"

A Textbook of General Bacteriology. By Edwin O. Jordan, Ph. D. Fully illustrated. Fifth edition, thoroughly revised. Philadelphia: The W. B. Saunders Company. 1916. Price $3.25.

Bacteriology is chiefly of professional interest to the medical student and practitioner, although the subject also bears technical relations to household administration, to agriculture, to sanitation and sanitary engineering, besides various industries and technological pursuits. Indeed, for the general scientific student and reader, bacteriology presents certain aspects that tend to widen ones' outlook upon a variety of human interest.

Although, thus, the study of bacteriology covers a far wider territory than that of disease causation, it is confined to it in this treatise, being, however, quite logically extended to a discussion of immunity. In addition to bacteriology in its limited meaning, the pathogenic protozoa also are treated of. Finally, the relation of bacterial life to milk and milk-products, to the arts and industries, and, lastly, to certain diseases in plants is considered.

TUTTLE AND HURFORD: "DISEASES OF CHILDREN"

Diseases of Children: A Manual for Students and Practitioners. By George M. Tuttle, M. D., and Phelphs G. Hurford, M. D. Third edition, thoroughly revised and enlarged. Illustrated with 47 engravings and 3 plates. Philadelphia: Lea & Febiger. 1917. Price, $3.50.

In the present edition of this manual, Finkelstein's excellent classification has been followed in dealing with the disorders of digestion and nutrition, a topic that in the past suffered from hopeless confusion, owing to the various systems of classification and delimitation adopted by different authors. The treatment of the subject-matter is terse and concise; unfortunately, though, with the result that

the text often becomes monotonous. Nevertheless, the book is very serviceable for rapid consultation, even though not adapted for detail study. The emphatic position taken by the authors in, for instance, the necessity of treating the first teeth promptly at the first evidence of decay, is to be commended.

While the teachings of this manual are well in line with modern thought, the form in which they are presented give support to the reproach, not infrequently heard, that physicians are careless writers. The diction is too monotonous to hold the attention of the reader, and many times sentences are constructed on anything but correct principles. For instance: "It is here that the value of cultures of the lactic-acid bacillus are recommended," or, "after prolonged use of a generous diet of condensed milk with no other food at all," or, "any complication that may arise is best seen with a surgeon." Such careless phraseology should not be found in books written by members of one of the socalled learned professions.

BOSANQUET AND EYRE: "SERUMS, VACCINES, AND TOXINS"

Serums, Vaccines, Toxins in Treatment and Diagnosis. By Wm. Cecil Bosanquet, M. A., M. D., and John W. H. Eyre, M. D., M. S. Illustrated. Third edition. New York: The Funk and Wagnalls Company. 1916. Price $2.75.

On examining the present edition of this excellent little manual, the Reviewer finds the good opinion confirmed to which he gave expression in his discussion of the preceding edition (February, 1912, p. 227). The text has been revised to do justice to the remarkable progress made during the last six years in this form of diagnosis and therapeutics; also, the subject of chemotherapy, introduced by Ehrlich (in its limited and special meaning), has received attention. This is quite right; for, although the inclusion of drug-treatment in a volume professedly devoted to serums and vaccines may appear illogical, this is not actually the case, since the lethal action of arsenical compounds and dye-stuffs upon certain protozoal parasites depends upon principles fundamentally identical with those governing the action of specific remedies (serums, vaccines, bacterins) upon microbes.

As pointed out in our review of the second edition, the conservative attitude of the authors tends to make their book all the more reliable as a guide for the general practitioner, since it would discourage and discountenance indiscriminate enthusiasm in the use of biological remedies. Undoubtedly, the "etiological" treatment of microbial diseases is correct in principle and successful in practice; yet, it must never be lost sight of that its employment demands greater care and discrimination than does the prescribing (often deplorably haphazard) of what we call drugs. This manual by Bosanquet and Eyre is recommended, cordially and with full confidence as a dependable guide for study and use.

"PRACTICAL MEDICINE SERIES"

The Practical Medical Series. Comprising 10 volumes on the year's progress in medicine and surgery. Chicago: The Year Book Publishers. Series 1917. Price $10 for the 10 volumes.

Volume III. "The Eye, Ear, Nose, and Throat." Edited by Casey A. Wood, C. M., M. D.; Albert H. Andrews, M. D., and George E. Shambaugh, M. D. Price $1.50. Volume IV. "Gynecology." Edited by Emilius C. Dudley, A. M., M. D., and Sydney S. Schochet, M. D. Price $1.35. Volume V. "Pediatrics." Edited by Isaac A. Abt, M. D., with the collaboration of A. Levinson, M. D. "Orthopedic Surgery." Edited by John Ridlon, A. M., M. D., with the collaboration of Charles A. Parker, M. D. Price $1.35.

QUIZ COMPENDS

"A Compend of Human Physiology." Especially Adapted for the Use of Medical Students. By Albert P. Brubaker, A. M., M. D. Fourteenth edition. With 26 illustrations. Philadelphia: P. Blakiston's Son & Co. 1917. Price $1.25, net.

"Potter's Compend of Materia Medica, Therapeutics and Prescription Writing," With Especial Reference to the Physiological Action of Drugs. Based on the ninth revision of the U. S. Pharmacopeia; including, also, many unofficial remedies. By A. D. Bush, B. S., M. D. Eighth edition, revised. Philadelphia. P. Blakiston's Son & Co. 1917. Price $1.25, net.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Queries

Query 6337.—"Mucous Colitis?" H. H. K., Kansas, requests help in the case of a woman 28 years old, married three years and never pregnant; family-history the best. She had scarlet-fever when a child, recovering completely, and had been in good health and taught school for four years. More than a year ago, noticed that, when her bowels moved, a lot of mucus passed and more mucus, at times, with little blood, would be voided three or four times during the next few hours, when it stopped until the next bowel movement the following day. At one time, no mucus was discharged for three and one-half months. About six months ago, examination disclosed a mass the size of a small orange in the region of the right ovary. It was diagnosed as an ovarian cyst. On April last I operated, and found the right ovary entirely destroyed within a cyst; the appendix adherent to the underside; the colon slightly enlarged and elongated. She recovered completely, leaving the hospital in sixteen days. On June 3, she again passed a large amount of mucus, with some blood, and nearly every day, since, has passed some.

"When the cyst was found I thought the solution was, the presence of a sinus opening from the cyst to the colon, but, such was not the case. I made a thorough rectal examination before the operation and went over the colon when operating, but found no evidence of any such connection. I had a complete blood examination made before the operation; everything was normal. Since June 3, I had her on the combined sulphocarbolates, following calomel, podophyllin, and bilein. There were no results, except that for a few days nothing passed, while, the bowels moved regularly. On June 20, I started giving her, every second day, one ampule of coli-combined polyvalent bacterin. Her general condition is improved, but she still is passing this mucous. What else can be done?

We are inclined to believe that your patient suffers from mucous colitis. It would be well for you, we think, to send a specimen of feces, also some of the mucus voided afterward, to a reliable pathologist, for examination.

As you are aware, in certain types of the disease, mucus is not found mixed with the stool but is passed in ribbon or jelly-like masses shortly after each bowel movement.

There has been a tendency on the part of some writers to regard this form of mucous colitis as a neurosis; in fact, it has been spoken of as "nervous colitis." Thomson regards this view as analogous to that of the philosopher who admired the wisdom of the Creator in causing large rivers to flow past large towns; in other words, he thinks (and this writer agrees with him) that these gentlemen are putting the cart before the horse. Naturally, the colon, the lining of which has become diseased enough to cause such a secretion, presents wide tracts of surface for the absorption of all kinds of excrementitious poisons into the circulation, and it is these poisons that produce all the so-called nervous symptoms referable both to the splanchnic and the cerebrospinal tracts.

Of course, nervous lesions or irritations may sometimes produce trophic changes, but, it it is difficult to cite an instance of chronic fluxes from mucous membranes having such origin.

Unfortunately, this condition is prone to prove particularly rebellious to treatment.

Perhaps nothing is so soothing, if tenesmus or bearing-down pains are present, as free irrigation of the colon with physiologic salt solution, to which a little menthol (or oil of peppermint, 5 drops to the pint) may be added. It is necessary, of course, to see to it that all the fluid is returned. Great quantities of mucus may thus be dislodged and washed away, although sometimes it happens that after the irrigation the patient has a painless movement consisting of mucus without shreds of membrane.

A great many clinicians have found benefit from the use of resorcin solution, first washing out the colon with physiologic salt solution and then injecting from ½ to 1 gallon of water, at body-temperature, in which from 50 to 100 grains of resorcin has been dissolved.

Further, do not forget that in these cases castor oil is, unquestionably, a remedy of real value. One full dose should be given every third night, while, in the meantime, you may administer, with advantage, hydrastin and hamamelin, in ⅓-grain doses, three times daily. The aqueous extract of calendula may be given internally and also employed locally. This writer uses 4 ounces to the quart of warm water, placing the patient in knee-chest position, the solution to be retained as long as possible. The best effects are secured if this solution is injected after the colon has been flushed with salt solution.

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Query 6338.—"Cystitis. Possible Spinal Lesion." W. W., Missouri, forwards a 24-hour specimen of urine for examination, to determine the diagnosis and obtain some suggestions as to treatment of a seeming case of interstitial nephritis.

"Married woman: age, forty-two; height, 5 ft. 11 in.; weight, 164 pounds; had all diseases of childhood, including scarlet-fever; fair health until puberty (13th year). Fell from horse at this age, injuring left femur, resulting in six years of illness (bed-confined). A sinus formed, which was lanced and relanced, but, finally healed under antiseptic irrigations in three weeks' time. General health during this time became much impaired; amenorrhea, et cetera. About age of 20, had second fall, from a horse. Was unconscious for about four hours and cut and bruised about right ear and side of face. Had a discharge from left ear for some time. Married at 23. Soon had a third fall, from a runaway horse, resulting in pelvic pain and more or less general distress. After one week, was examined by doctor, who discovered a very small fibroid tumor of uterus. She objected to operation, and suffered with more or less impaired health for eight years, when she decided upon operation, pressure disturbances making life very unpleasant. No pregnancy during this time. At operation, a tumor weighing 8 pounds and both ovaries were removed. The appendix was left, which later has caused some trouble. After operation, she remained in hospital ten weeks, for heart treatment. Discharged in very good condition. Soon noticed hot flashes in the night and was forced to sleep under light cover. Is habitually constipated and urinates several times each night.

"In February, 1916, acute suppurative otitis media occurred, which lasted six weeks, and this was complicated by Bell's palsy of right side. Under careful local and systemic treatment, all symptoms disappeared, except for an occasional dull pain in region of the mastoid, drooping of right eyelid and slight twitching of facial muscles and corner of mouth on right side, especially if exposed to cold.

"As a blood pressure of 170 systolic and 130 diastolic was noted, potassium iodide was given, but without results. In June, 1916, special attention was directed to the kidneys, owing to polyuria (from 2 to 5½ quarts passing within twenty-four hours), with very severe pain in post-cervical and occipital regions, ending often in nausea and vomiting. Blood pressure at this time fluctuated between 165 and 190 systolic and between 125 and 155 diastolic. Hypertrophied heart, some precordial pain and distress; fatigue on slight exertion; more or less gastric distress; very severe occipital pain, with drawing and tingling of fingers; slight edema under eyelids; no swelling about ankles; arteries seemingly hard. Urine: low gravity, averaging 1011 to 1005, no albumin, no casts

"Intestinal cleanliness was maintained and sodium iodide pushed; sodium nitrate, nitroglycerin and gelseminine also were administered, in turn, but, the high blood pressure was affected little by any of them and pain has persisted steadily. Attacks of indigestion have become rather frequent of late, appetite is poor, patient

looks anemic and has no energy. Eyes become painful on reading. Teeth are not in best condition, but give no special trouble. Entire head gets tender after the severe pain attacks; it is painful to talk loud, laugh or walk, and vertigo is caused by bending forward. 'Sick-headache' pains, with indigestion, vomiting, and so forth, seem, of late, to be this patient's lot. Is any relief possible?"

As you will observe from the laboratory-report, there is every evidence of the existence of cystitis, probably of traumatic origin. This particular specimen presents none of features we would expect to find in nephritis, casts being entirely absent, as also is albumin, save that due to the pus in it. The specific gravity, considering the amount of urine voided, is not particularly low. Moreover, there are very few renal cells and no red blood-corpuscles; colon bacilli, though, are present in considerable number.

For all that, however, even a comparatively severe cystitis hardly would account for the train of distressing symptoms presented by your patient, although, as you are aware, pronounced systemic toxemia may be manifested under such circumstances.

First and foremost, we must bear in mind the fact that this woman has been thrown from a horse three separate times, so that it is more than possible that a subluxation of the vertebrae exists. We would at least examine the spine very carefully. The possibility of labyrinthine disease must not be overlooked.

You say, also, that in 1911 a fibroid tumor was removed, "together with both diseased ovaries." What was the nature of the ovarian affection?

It is unfortunate, of course, that the appendix was not removed. We are inclined to believe that much of the later trouble has an appendicular origin. That the woman is profoundly septic is evident and, were we in your place, we not only should secure thorough elimination—renal, dermal, and intestinal—but, administer an autogenous bacterin; or, you may use, temporarily, the stock coli-bacterin. Internally, acid sodium phosphate, 10 grains, and hexamethylenamine, 5 grains, every three hours, with some such combination as papain, gr. 1; pepsin, gr. 1; berberine hydrochloride, gr. 1/132, and strychnine sulphate, gr. 1/128, before meals; and diastase, 1 or 2 grains, after eating.

At least three times a day give some such concentrated nutrient as liquid peptonoids, with a little cracked ice. Morning, noon, and night, give cactin, 1/32 grains.

The bladder should be irrigated carefully with a 2-percent ichthyol solution, or, with a 1-5 percent solution of chlorazene. We should not hesitate to give copious enemata of salt solution. Under the circumstances, we should not advise the use of sodium iodide or such powerful agents as sodium nitrate or nitroglycerin.

Continue the dietary restrictions and insist upon the patient's drinking plenty of pure water or, better, still, barley-water made extremely thin and flavored with a little lemon-juice.

—

Query 6339.—"Coli-Cystitis." A. A., Oklahoma, forwards a specimen of urine or, rather, what was drawn from the bladder of a child six years old. "The urine voided is acid and contains 'strings of mucus.' This has been coming on for three years. There is much pus in the bladder. No tuberculosis in family history. Child has history of fever at different periods. Eats heartily at times and sleeps very soundly at night. Voids urine in sleep at night. Has enlarged tonsils, no atrophy. Bowels in good condition. Is dull and stubborn. Skin dry and scaly. Growth and development about normal."

Your little patient suffers from coli-cystitis; colon-bacilli, streptococci, and staphylococci being present in the urine forwarded. We strongly urge the prompt use of an autogenous bacterin. In the meantime, place the child on arbutin, 1-3 grain; hexamethylenamine, 1 grain, and ammonium benzoate, 1 grain; with 4 to 6 ounces of barley-water, repeated every three or four hours.

Wash out the colon every night with salt solution at body-temperature, allowing some of the fluid to be retained. Catheterization (if done) must be most carefully performed and the strictest asepsis observed.

—

Query 6340.—"Flooding Due to Marginal Implantation of Placenta." H., Tennessee, reports the case of a multiparous woman, 27 years old, who previously had good

health, but, whose father and mother both died of tuberculosis. She has had all diseases common to childhood. There is no history of gonorrhea or syphilis. When called, I found her with very severe pain in the abdomen and a profuse hemorrhage from the uterus; so large a quantity of blood was lost that she had no radial pulse half the time. There also was dilatation of the pupils. She could give no positive or probable signs of pregnancy. Examination disclosed the vagina and uterus in a normal condition, and no tenderness or pain in the ovarian region. Previous to this time, she had always had regular menstruation, almost to the hour. Never had an abortion or miscarriage. She was given morphine and atrophine, a small vaginal tampon was inserted, and rest in bed and absolute quiet were enjoined. The anemia was combated with general tonics, iron predominating. Oozing continued for four days, then the discharge suddenly ceased, when she was dismissed.

"Three weeks later, profuse hemorrhage occurred again, without any pain whatever. She received the same treatment as before and soon got better. She then began having flooding-spells every two or three weeks for three months, at which time she informed me that she was pregnant and thought she felt the child move. I was able to get ballottement, also found a very severe endocervicitis and erosions. Blood, mucus and pus of a very offensive odor was discharging from the uterus.

"I began using applications of Battay's solution every other day, with tampons of ichthyol, tannic acid, and glycerine. She at once began to improve and in the course of two weeks was in a condition to be dismissed. Later, I delivered her of a 7½ months' baby (in L. O. A. presentation) under normal duration of labor. Her recovery was uneventful. Today, she is the picture of health. I, of course, suspected mucous polypus and can not now give any reason why I did not curette. I would like to hear whether anyone else has had cases of this kind. Also, where and from what cause came the blood, mucus, and pus."

Unfortunately, doctor, you do not state the condition or shape of the placenta. All the symptoms you enumerate would lead us to believe that you had to do with a marginal implantation. The endocervicitis might account, of course, for most of the discharge. Still is it just possible that pressure-necrosis had something to do with it.

QUERY 6341.—"Stomatitis or Syphilitic Sore Throat." J. H., Texas, is treating a man twenty-eight years old who has been in the United States army four years and came home with a bad sore throat, the pharnyx, roof of mouth, the soft and hard palate all being inflamed and covered with a whitish coating as though scalded. No history was obtainable, but he says that the army doctor told him he "might have gotten it from a canteen." He denies having had chancres. Around the back teeth there is some pus and the gums are quite inflamed.

"This is the most intractable sore throat I ever saw. Am using antiseptic washes of peroxide, mercuric chloride, potassium permanganate, etc., and prescribing internally mercury protoidide, 1-4 grain, three times a day. No impression has been made to date. The man is young, in robust health, and there is nothing else wrong discoverable. I am giving purgative salines, along with other medicines. Is my diagnosis correct?

Off hand, one would be inclined to regard your diagnosis as correct, but, it is not impossible that your patient suffers from one of the more severe forms of stomatitis. In order to settle the matter, it would be well to have a Wassermann test made. Further light might also be gained by examining a specimen of the pus from the gums.

Typical lesions or mucous patches seem to be absent. You do not mention the appearance of any skin lesion whatever. We would be inclined (until a definite diagnosis has been made) to relinquish the use of mercurials. Cleanse the affected area thoroughly with peroxide of hydrogen, 1 part to 2 parts of water, then rinse with warm boric-acid solution. Swab with a dilute iodine solution. Chlorazene, in ¼-percent solution, also might be used to advantage. Internally, give full doses of echinacea and irisin, with blue mass and soda, 1-2 grain, and podophyllin 1-6 grain, half-hourly for four to six doses every third night.

Examine both nose and throat carefully with reflected light. State condition of tongue. Is this man a heavy smoker or has he used alcohol excessively?

Mouth Hygiene is attracting a good deal of attention these days, and while generally accepted as meaning care of the teeth, it is recognized that something more is required to secure mouth hygiene than mere tooth brushing.

The mouth offers a most favorable place for germs to develop, it is of just the right degree of temperature and moisture and there is generally enough food present to make an unclean mouth a veritable incubator for germs of all sorts.

Dioxogen may fairly lay claim to being the best mouth wash available. A liquid germicide, it penetrates to the remotest recesses, where it loosens and detaches adhering materials, purifying and cleansing everything it touches.

Dioxogen contains no flavoring extract to give a false sense of security nor does it contain anything injurious to the teeth - on the contrary it is as harmless as water.

Dioxogen is superior to acetanilid preserved solutions of peroxide of hydrogen for mouth use; it does not turn rank or bitter, is almost neutral in reaction and does not coagulate albumen. Mouth washes that coagulate albumen form a protective coating for germs.

Physician's sample will be gladly sent on request.

THE OAKLAND CHEMICAL CO.
10 ASTOR PLACE NEW YORK.

News Notes Department

In the treatment of gonorrhea, the internal administration of appropriate remedies has always been looked upon with much favor by practitioners; it being, properly, not thought sufficient merely to inject antiseptic remedies into the inflamed urethra, but to influence the whole organism so as to enable it to throw off the infection. The employment of preparations containing sandalwood oil in one form or another, often gave rise to untoward by-effects until a remedy was available which is not subject to any objections on that score. We refer to Gonosan, put on the market by Riedel and Company, 35 West 32d Street, New York, in which the sandalwood oil is supplemented by kawa-resin, an internal analgesic that removes the pain and sensitiveness of the inflamed urethra and, likewise the pain of erections during gonorrheal urethritis. Gonosan does not, however, merely lessen the painful symptoms of specific urethritis, but, it acts beneficially upon the infection itself, encouraging the destruction and elimination of the gonococci. Certainly, Gonosan is a valuable remedy and has made good its claim to the consideration of physicians.

One of the saddest results of acute anterior poliomyelitis, that terrible affection which of recent years has been epidemic in several parts of the country in an unusual degree, is, the paralysis of motor function, and the fact that it leaves its victims crippled and, therefore, handicapped in the struggle for existence. In this respect, infantile paralysis is as great an enemy to childhood as tuberculosis, if not a greater one. Fortunately, it has been found by careful mechanical training and education to overcome many of the serious disabilities of the disease, just as great improvement has been made in counteracting the consequences of bone and joint tuberculosis as well as other deformities. All this work, which is included in the general term orthopedics, requires special and expert knowledge, and should be undertaken only by persons who possess the requisite training. In the Roth Orthopedic Institute, 162 W. 75th St., New York, the conditions for successful treatment are complied with, the methods followed in this institution having been crowned with remarkable success, and having received the endorsement of many orthopedists of repute, among others, the well known Professor Lorenz, of Vienna. The Roth Orthopedic Institute is an institution worthy of your confidence, Doctor, in case you have patients requiring their special services.

In the educational work of physicians, and especially in the work of health officers, it is often necessary to illustrate lectures and talks delivered before school children, adults, or mixed

SIOMINE
"S-IOD-AMINE"

(Hexamethylenamine tetraiodid; Iodin content, 78.5 per cent.)

USES: Where iodids are indicated, especially in tertiary syphilis—bone lesions, ulcers, gummata of brain and other organs, locomotor ataxia, neuritis, skin lesions. Also in arteriosclerosis especially with high blood tension; asthma; acne; chronic rheumatism.

ADVANTAGES OVER POTASSIUM IODID

SIOMINE has all of the valuable therapeutic properties of potassium iodid and is free from many objectionable features, not the least of which is its nauseating effect.

SIOMINE is well borne, prompt and efficient in action. When administered as recommended it does not produce any gastric disturbance.

SIOMINE is administered easily and in accurate dosage because it is a solid of unvarying composition and it is exhibited in capsules.

SIOMINE has been pronounced a satisfactory and welcome substitute for potassium iodid, because being a solid it can be administered conveniently and the disagreeable and unpleasant taste of potassium iodid is eliminated.

Write for descriptive literature to the

HOWARD-HOLT COMPANY, Inc., Cedar Rapids, Iowa

Manufacturing Pharmacists

True Fruit Flavors

Jiffy-Jell

For Quick, Fruity Gelatine Desserts

Flavors in Glass

Gelatine Dainties

With Unique Fascinations

Free Trial Lots

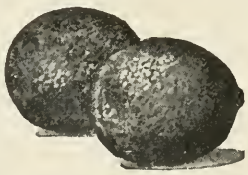
We urge physicians to ask us for a trial lot of Jiffy-Jell in various fruit flavors. It will give you a new conception of these ideal dainties for the sick and convalescent. One great distinction lies in the gelatine itself. Jiffy-Jell is made with an extra-grade gelatine, which the owners of Jiffy-Jell produce.

The output of this grade is limited. It costs twice as much as the common. And in these days of gelatine shortage, it is a very hard grade to insure.

Economical Delights

Jiffy-Jell is easily digested. Its crushed-fruit taste makes it appetizing. It is made in an instant, at a trifling cost. It forms a conveyor for other foods, like whipped cream, nuts, chocolate, vegetables, rice, etc.

Mint flavor makes an ideal relish jell. Lime flavor makes a tart, zestful salad jell. The other fruit flavors give a wide variety of tempting, fruity dainties.



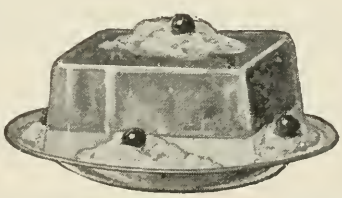
Fruit-Juice Flavors

The flavors for Jiffy-Jell are made from the fruit itself. Not one is artificial.

The flavors come sealed in glass vials, so they cannot change—one vial in each package.

The flavors are abundant. For instance, half a ripe pineapple is used in the flavor for one Jiffy-Jell dessert.

No other gelatine product is accompanied by bottled flavors of this kind.



Please prove these facts in your own home. Let us send you some Jiffy-Jell to try. A request is sufficient.

Jiffy-Jell has been approved by Prof. Allyn of Westfield; also by Dr. Wiley.

Waukesha Pure Food Co., Waukesha, Wis.

10 Flavors in Glass Vials

Each package contains the flavor in separate vial

Strawberry		Orange
Raspberry		Lemon
Loganberry	Lime	Cherry
Mint	Pineapple	Coffee

audiences, by means of lantern slides. Many physicians who are engaged in this kind of work have accumulated numbers of lantern slides, and the housing and preservation of these is rather a problem. This work recently has been facilitated through the Moler Sectional Lantern Slide Cabinet, sold by G. S. Moler, 408 University Ave., Ithaca, N. Y. The cabinet offered by this concern not only is practical and sightly, but makes it possible to store away large numbers of lantern slides compactly, and, yet, in such a manner that they are easily located for removal and replacing. Any of our readers who have occasion to use lantern slides will be glad to know of this means for taking care of them.

The Children's National Tuberculosis Society is a nonsectarian organization actively engaged in antituberculosis work. It is chartered under the laws of the states of Illinois and New Mexico, not for profit. This society is endorsed by the Alamogordo Commercial Club, Alamogordo, New Mexico, and has its home office at 35 S Dearborn St., Chicago, Ill.

There is published a monthly magazine, "Our Tuberculous Children," which sells at 10 cents a copy, the annual subscription price being $1.00. Associate membership calls for an annual fee of $1.00, while fellowship in the society is $2.00 and supporting membership $5.00 every year. The aim of the society is, to help in the prevention of the white plague by education, using the profits from the sale of its publication and memberships in maintaining a home in Alamogordo, New Mexico, where tuberculosis children are cared for free of charge, including free transportation.

A new antiseptic which is attracting much attention and which has recently been introduced by Dr. H. D. Dakin, of the Herter Laboratory, New York, is Toluene-para-sulphondichloramine-or, as it is commonly known, Dichloramine-T. T. This antiseptic is used in oil solution, either as a spray or as a direct application.

The Dichloramine-T is dissolved in a Chlorinated Eucalyptol solution, then diluted to proper strength (from 2 to 7½ percent), with Chlorinated Paraffin Oil.

In a paper published in the July 7 number of The Journal of the American Medical Association, Dakin, Lee, Sweet, Hendrix, and LeConte tell of the use of this substance in 160 cases of infected wounds. They found that when sprayed upon these wounds or poured into them the length of time required for healing, compared to the usual methods of treatment, was reduced to one-third. The wounds were healed in one-sixth less time than by the celebrated Carrel irrigation method; also, the expense of dressings and nursing, and the technical skill required in the application, was much less than by the irrigation method. It has also been found that Dichloramine-T, when sprayed into the nose and throat, is an effective method of treating diphtheria and meningococcus carriers.

Dichloramine-T contains about 29 percent of chlorine, and, as already indicated, can be used in very high concentration. It is also possible to apply to infected tissue solutions from 20 to 40

Even Automobiles can't use Paraffin Oil

Why then prescribe Paraffin Oil for intestinal lubrication?

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LIQUID ALBOLENE

is free from wax (paraffin)

It spreads, mixes and penetrates with **mechanical** efficiency, is **chemically** free from sulphur, wax, waste, etc., and is physiologically inert

The Pioneer and the Paramount in Mineral Oil Therapy

SAMPLES *LITERATURE*

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The Doctor a Dietitian

Modern Science is well abreast of modern advancement along all lines. The Physician no longer thinks of restricting his work and service to a formal diagnosis and the writing of prescriptions.

Recognizing that "Nature unaided fails" the modern Medical Man **aids** nature—assists natural functions in his patients. In this service, the question of food—easily digestible, nutritious and available food—becomes as vital as the selection of indicated medicaments.

Many have come to rely on just such easily available food, with a natural, appealing flavor—

Grape-Nuts

with Cream or Good Milk.

Made of whole wheat and malted barley, and baked so thoroughly as to make it a sterile, sanitary, satisfying aliment, Grape-Nuts has, for two decades, been the standard of perfectly balanced food.

The "Clinical Record," for Physician's bedside use, together with samples of Instant Postum, Grape-Nuts and Post Toasties, for personal and clinical examination, will be sent on request to any Physician who has not already received them.

Postum Cereal Company,

Battle Creek, Mich., U. S. A.

times as great as is possible with the Dakin-Carrel hypochlorite solution.

This substance has been placed upon the market by The Abbott Laboratories, who also supply the Chlorinated Eucalyptol and Chlorinated Paraffin Oil prepared ready for use, according to the method described by Doctor Dakin. Dichloramine-T promises to be a worthy partner of Chlorazene, the water-soluble antiseptic also devised by Dakin, which was placed upon the market by The Abbott Laboratories and which is proving such a phenomenal success.

Physicians are advised to familiarize themselves with these two antiseptics. Literature and prices will be sent on request to The Abbott Laboratories, Chicago.

In these times of efficiency many appliances that were deemed luxuries about twenty years ago have become necessities, and as no household "is complete without" a telephone, so it may be said that the general use of the typewriter has extended far beyond its employment for business correspondence and business records. Indeed, it has been accepted, at least in this country, for a suitable and acceptable medium of all kinds of records, letters, and correspondence. The demands made upon the typewriter differ somewhat with the purpose to which it is put, and many times it is desirable to have a portable machine that can be carried from place to place. The Hammond Typewriter Company, 635 E. 69th St., New York, claims various points of superiority for its writing machine, among which is the very potent one of interchangeable

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A Time-Tested Ethical Emulsion of Cod-Liver Oil

JUST—

PURE
FRESH
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emulsified by a process that facilitates its hydrolysis in a marked degree and makes it thoroughly

PALATABLE
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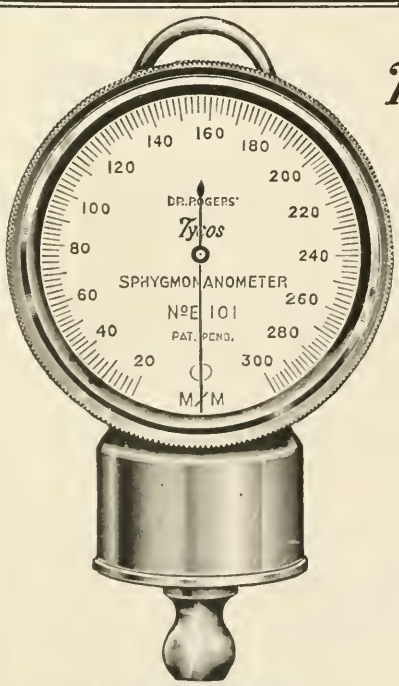

NEW SELF-VERIFYING TYPE
Actual Size

Announcing the

Tycos Sphygmomanometer

Exchange Proposition

For over three years the *Tycos* self-verifying instrument has been in the hands of the medical profession. It has served them well, meeting in full measure all demands made upon it. Its self-verifying feature makes it mechanically impossible to be incorrect if hand returns to within the oval zero. The large, open spaced 300 m. m. dial enables close readings and renders plainly visible variations of pulse rate, rhythm and amplitude. The *Tycos* recognized as ***the*** Sphygmomanometer, minimizing the doctor's anxiety as to the accuracy of his blood pressure determinations.

Many doctors having successfully used our old type for many years (adjustable dial) may now desire to exchange for the later model fixed dial, self-verifying instrument (see illustration). The charge for making such exchange will be

$8.00

and return of old type manometer. (Instrument alone—not sleeve band, case and bulb.)

As a convenience, exchange should be made at dealers wherever possible.

As this liberal exchange policy cannot be extended indefinitely, advantage should be taken at once—***Offer expires Nov. 1st, 1917.***

Our New Book—Blood Pressure Simplified—
Price $1.00

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A post card request brings Blood Pressure Manual—a booklet of 32 pages

Taylor Instrument Companies
ROCHESTER, N. Y.

Modern Treatment of Syphilis

ONLY in recent years have physicians found that THE PROPER COMBINATION of mercury and iodine has greater scope in all stages of syphilis than either drug alone. Their remedial action in combination is much more promptly exerted. The discomforting effects of mercurialization and iodism are easily escaped.

How administer the proper combination in a form that was convenient, palatable and free from by-effects? The answer to that question was found, after years of experiment, in

PIL. MIXED TREATMENT

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Biniodide of mercury, readily soluble in potassium iodide, forms a solution which is quickly absorbed into the circulation. These ingredients, in powder form, surrounded by a capsule, make the Chichester preparation promptly effective, tasteless and non-irritant. It is more economical than the combination in solution and more convenient to carry around.

Put up in bottles only, the price of which is $1.00. A sample quantity sent to any physician on request.

TERRALINE. a refined medical petroleum, is marketed in three forms: TERRALINE plain; with heroin; and with creosote.

Hillside Chemical Co.

(Incorporated)

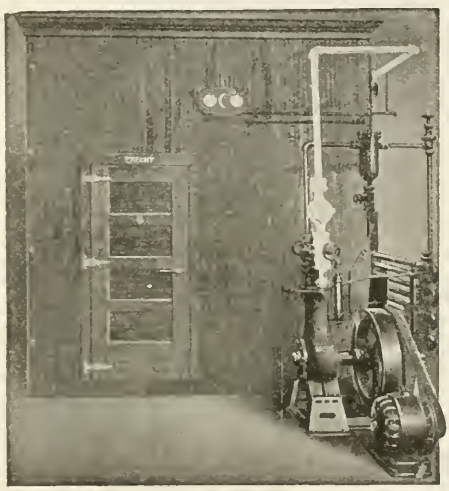
Newburgh, N. Y.

type, it being possible to change the type-wheels at will. A new model put up in a neat carrying case is offered which should be very convenient for army surgeons and physicians. This new feature will prove of interest to many men and can easily be investigated by writing to The Hammond Typewriter Co.

In cases where intensive feeding of an organism debilitated by disease or injury is called for, the requirements are, that the food that is administered should possess a high caloric value, be easily digested, and fully assimilated. It should contain the essential food elements in proper proportions and should be palatable. Finally, it is desirable, for ease of administration, that such a food be in soluble form, and also that it be economical. All these conditions are complied with in Ovaltine, marketed by The Wander Co., Dept. 10, 23 N. Franklin St., Chicago, a food preparation which, in addition to pure malt extract and milk, contains eggs scientifically prepared in their natural raw state. The caloric value of this preparation is about three times that of beef quantity for quantity. It is far superior to that of any of its constituents separately, and the nutritive value of the preparation is being attested by medical officers of the British, French, and Russian armies. The Wander Company has published an interesting booklet entitled, "The Economics of Nutrition," which will be sent on request.

When, in the course of the years, the first excessive claims concerning the action and value of preparations like creosote and ichthyol had been modified so as to correspond more closely with clinical facts and observations, these remedies by no means lost their popularity, despite the vogue that is now being enjoyed by biological and remedial agents. When it is possible to put up remedies like creosote carbonate and ichthyol in an acceptable manner, there can be no doubt of the great good that they may accomplish. It is for this reason that a preparation marketed under the name of Pulmotone appeals to us. This remedy contains ichthyol, creosote carbonate, diluted hydrocyanic acid, extract of malt and aromatics. Under the influence of both creosote and ichthyol there usually is an improvement in the appetite of the patients and in their general well-being. Both remedies tend to allay irritable cough and to facilitate expectoration, while they exert a direct antiseptic action upon the intestinal tract. The antispasmodic action of hydrocyanic acid is usefully employed in checking the reflex vomiting of wasting diseases, and, also, in relieving nervous cough. Extract of malt is employed widely as a concentrated food. It follows that Pulmotone may be counted upon to do excellent service in certain cases of pulmonary affections as well as in many wasting diseases and intestinal maladies.

In disposing of fluids accumulated in the tissues, the rational idea is, to administer such agents as exert diuretic properties and also act as a cardiac stimulant increasing the heart force. In the combination known as Anedemin the physician has at his command a powerful agent which serves this double purpose. Under the administration of Anedemin the kidney action is general-



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We have exceptional facilities for the manufacture of cold storage apparatus for Hospitals and Laboratories and solicit an opportunity of working out convenient and economical cooling methods for the proper care of food products, serums, parts for examination or other purposes; also problems of cold water distribution and cool air arrangements for fever cases are constantly coming forward, and where use of cold storage rooms or heat extracting apparatus is indicated, we offer our designing and engineering services free of charge to superintendents, architects and building committees who are confronted with such problems.

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Main Offices and Factories: ST. LOUIS, MO., 1202 Cass Avenue

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23 Rue de Rocroy

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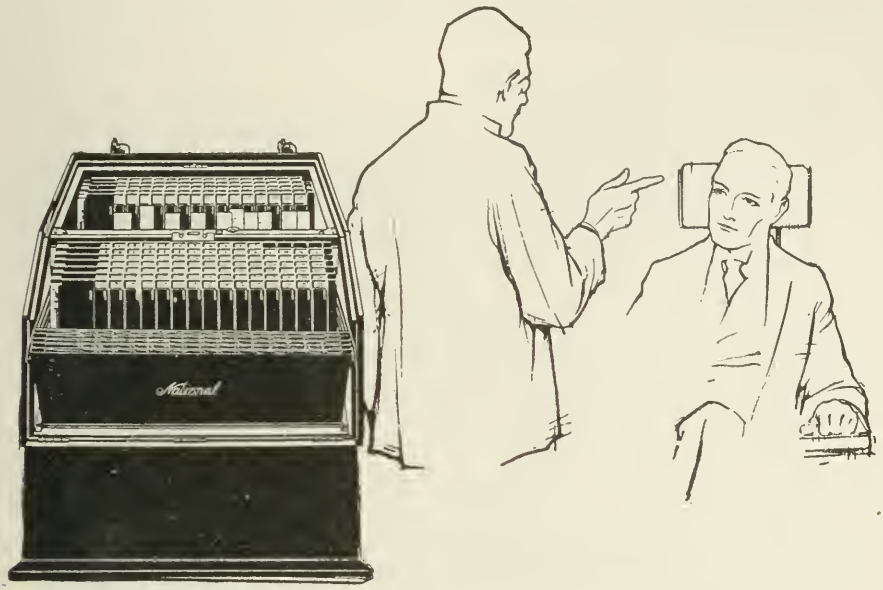

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No ledger—no more forgotten charges. Keeps every patient's account balanced to the minute and ready for immediate settlement Gives an accurate statement any time a patient wants one.

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Do not waste time, effort and patience doing the work a machine can do for you. Write to us for literature on the Credit File.

Address Department 5.

The National Cash Register Co., Dayton, Ohio

ly increased while the cardiac muscle is subjected to a definite and lasting augmentation of tone. This therapeutic combination enables the water-logged tissues to free themselves of the accumulated fluids, if this be at all possible, and reduces to a minimum the possibility of recurrence of the dropsical condition. A marked advantage of Anedemin is, the absence of cumulative effect. Thus it can be pushed for effect and this be maintained. Elsewhere in this issue the advertisement of Anedemin appears giving a more detailed explanation of the product. Anedemin Chemical Co., manufacturers, solicit test by physicians and mail without any cost on request a liberal quantity of Anedemin tablets free. Their address is Chattanooga, Tenn.

Many prominent physicians in this country who have investigated all forms of sinusoidal apparatus have adopted the Ultima No. 3 Sinustat especially for their outside use, many preferring it for office work as well. The physician interested in electrical equipment will do well to communicate with the manufacturers and receive the very liberal trial proposition they are offering this month. Address a post card to the Ultima Physical Appliance Co., 136 W. Lake St., Chicago, Ill., and a Chart of Sinusoidology worth $1.00 as well as a comprehensive booklet of clinical data will be mailed free as long as the supply lasts.

A further cause for gratitude to Doctor Dakin's untiring industry we find in a preparation which he elaborated for the purpose of disinfecting drinking water so as to render it potable and destroy any harmful bacteria that it may contain. This preparation is known as Halazone which is the trade name for para-toluol-sulphon-dichloramino-benzoic acid. We suggest that you write to The Abbott Laboratories, Chicago, asking for a reprint of a paper by Doctors Dakin and Dunham, entitled, "The Disinfection of Drinking Water, With a Description of a New Substance for the Preparation of Stable Tablets for the Sterilization of Polluted Water."

Malt Nutrine is a preparation of malt—that is to say, barley treated with pure filtered water, and hops which is a so-called bitter tonic of ancient and established reputation. Owing to its composition, its freedom from impurities or irritating substances, and its remarkably low alcohol contents (1.9 percent), Malt Nutrine presents a liquid food that is as efficacious as it is pleasant. The idea of employing barley and hops for supplying strength to the feeble and for increasing the strength of the strong is one of great antiquity, yet one that has hardly been superseded by any other food tonic in the peculiar conditions for which it is particularly applicable. Malt Nutrine has been found a galactogog of great merit, and also it is a reconstructive in convalescence from acute and wasting diseases. In short, it may be put to a large variety of uses in all of which it is dependable. For particulars write to Anheuser-Busch, of St. Louis.

The danger of prescribing the ordinary opiates and hypnotics in neurasthenia, particularly in females, would be sufficient reason for preferring PASADYNE (Daniel), even if it did not possess

IODIN

that will give Iodin results without the usual Iodin disturbances

ORGANIDIN -- WAMPOLE

Dr. ————, a prominent Western physician, reports a case of blood-pressure of 280 which Organidin, in 10 min. doses, reduced to 210 in one week. Patient is still taking the preparation and is steadily improving. No disagreeable symptoms from its use have been noted.

Trade-size package mailed to any address postpaid on receipt of $1.00. (1-oz. package, an ordinary three-weeks' treatment.)

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KORA-KONIA

Satisfies Physician Patient and Producer

KORA-KONIA satisfies your patient because it affords a perfect mechanical lubricant, ideal dry dressing and in addition it is a scientifically correct dusting powder that allays skin irritation, chafing, sunburn, prickly-heat, rash and raw or blistered surfaces.

KORA-KONIA satisfies you because it aids in healing, is convenient to use and is uniform in quality. It brings quick comfort, relief and rest through its soothing, cooling and healing qualities. Kora-Konia promotes granulation and is a fine powder to use on slow healing cuts, minor wounds and raw surfaces. By recommending it to your patients you fortify your prestige and aid your reputation.

KORA-KONIA satisfies us as producers because it has proven in actual use to have fully justified itself as a scientific and chemically correct dusting powder indicated in the treatment of acne, dermatitis, poison ivy, skin abrasions and for moist or discharging surfaces.

Supplied by your Druggist—25c
Test-it-yourself-package FREE by writing to

THE HOUSE OF MENNEN NEWARK, N. J.

a distinctive therapeutic value and one which entitles it to a place in the foremost rank of calming agents. It frequently happens that the need for a reliable soothing product arises in the management of a neurasthenic and, when it does, there is no better choice than PASADYNE (Daniel). Samples may be had by addressing the laboratory of John B. Daniel, Inc., 34 Wall St., Atlanta, Ga.

Here is an idea emanating from the office of the Frank S. Betz Company, in Hammond, Indiana, that is worth thinking about. One of the department managers of this institution writes to us as follows relative to the necessity of raising enormous sums of money for conducting the war in which we are engaged. He says: "To my mind the way to meet an increased expenditure is, to enlarge your income, and, the gospel of economy is a false gospel. I believe that the psychological impression cast abroad to curtail the purchasing of necessary articles is too great and that it will reflect a greater hardship ultimately on the American Public, than if the gospel of prosperity was preached and the suggestion thrown broadcast that you must buy from others, so that others can buy from you. I am convinced, that a greater contentment, a larger prosperity and a stronger weapon would be in our hands, than now, when magazines of all classes are continually preaching a gospel of economy." Our correspondent continues to say that, owing to the large drain upon the resources of the medical profession, through the many physicians serving with the army, it is necessary for those remaining at home to be equipped all the better in order that they shall be enabled to take care of the increased amount of work that is laid upon them, and, for this reason he believes physicians would not be wise to curtail their expenses but, rather, should extend them so as to widen and enlarge their possibilities and facilities.

There is something in this argument that deserves attention. Suppose you think it over, Doctor, and whether you want to dispute it or work it out, write to the Sales Manager of the Frank S. Betz Company.

Cystogen, an American product made by The Cystogen Chemical Co., St. Louis, Mo., is a chemically pure hexamethylenamine, and is applicable in all conditions in which this agent has been prescribed with signal success for many years, more particularly in cases where a urinary antiseptic is required. The Cystogen Chemical Company offers, in addition to Cystogen put up in 5 grain tablets, combinations such as Cystogen Aperient, containing Cystogen, sodium phosphate and sodium tartrate; also Cystogen-Lithia, composed of Cystogen and lithia. The indications for these remedies are self evident, and the manufacturers have prepared interesting literature on the subject that is yours for the asking.

It is now more than fifty years since Gail Borden first manufactured condensed milk on a commercial scale. In 1856, he received a patent for a "process for concentrating sweet milk by evaporation in vacuo, having no sugar or other foreign matter mixed with." Although the commercial exploitation of this process of milk pre-

DOCTOR, we will make a Spinal Appliance *to order* for any case and allow a 30-day trial

Did any other orthopædic institution ever make you a like offer? Do you know of any other orthopædic institution that will make you a like offer? We offer to make you an appliance to special order for any of your patients and let it prove its usefulness.

We have been doing business on that plan for more than fifteen years. During this time more than 30,000 cases of spinal trouble have been either wholly cured or greatly benefited by the Philo Burt Method, consisting of a light comfortable appliance and special exercises.

If you have a case of spinal weakness or deformity now—no matter whether it is an incipient case or one seriously developed—write us at once and we will send you full information about this wonderful method, with incontrovertible proof of its efficiency.

Every Philo Burt Appliance is made to special measurement. It lifts the weight of the head and shoulders off the spine, and corrects any deflections in the vertebræ. It does not chafe or irritate, weighs ounces where other supports weigh pounds and is easily adjusted to meet improved conditions. The Philo Burt Appliance can be put on and taken off in a moment's time. It is easily removed for the bath, massage, relaxation or examination.

The price of the Philo Burt Appliance with the special course of exercise is within reach of all, and each appliance is fitted under our absolute guarantee of satisfaction or money back.

Write for our illustrated book and our plan of co-operation with physicians.

PHILO BURT MANUFACTURING CO., 13 Odd Fellows Temple, JAMESTOWN, N. Y.

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ETHER
for ANAESTHESIA

Standard Quality

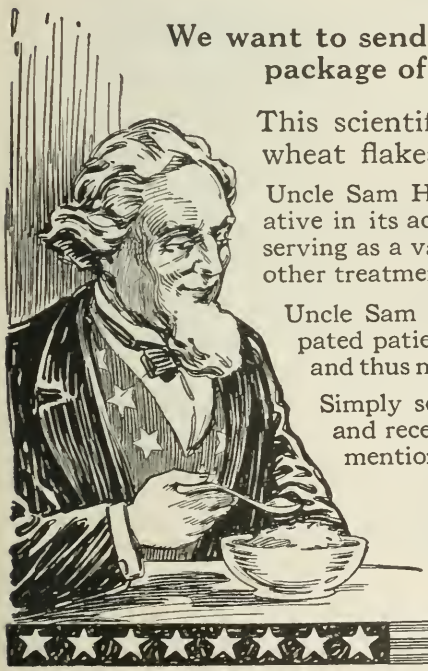
**Continuously tested
in our Laboratories
to insure uniformity**

Half pound sample sent on request to any surgeon

DU PONT CHEMICAL WORKS
120 Broadway (Dept. 628) New York

Doctor, have you a case of Chronic Constipation under Observation?

We want to send you for a trial a full-size free package of Uncle Sam Health Food



This scientifically prepared food contains flaxseed and wheat flakes, nicely balanced and most palatable.

Uncle Sam Health Food is not only easily digested, but it is laxative in its action, affording the patient relief naturally and thus serving as a valuable adjunct to the physician, together with any other treatment he may decide to use.

Uncle Sam Health Food used regularly will keep your constipated patients in excellent shape to respond to other treatment and thus make your work uniformly successful.

Simply send your name and address today and receive a full-size package free. Please mention this journal.

Uncle Sam Breakfast Food Co.
OMAHA, NEBRASKA

servation is to the credit of Gail Borden, it was a Frenchman who first thought of it, and an Englishman, named Newton, who perfected the process. However that may be, the practical preparation and use of condensed milk is associated with the name of Borden and even today the Eagle Brand, a product of Borden's Condensed Milk Company, of New York, is one of the most favorable known brands of condensed milk. The Borden's people have issued some highly instructive and interesting literature which they will be glad to send on request.

A patient in a Pennsylvania city, suffering for over one year from an eczematous ulcer on her leg, was told by her physician that unless entire rest was instituted a cure would be impossible. As she declared that absolute rest was not to be thought of, owing to her circumstances, Bovinine was applied to the ulcer which in time showed decided improvement, and, ultimately, healed entirely. This is a specimen case out of many that have been reported to The Bovinine Company, 75 W. Houston St., New York City.

Intravenous Therapy marks a great advance in Therapeutic Progress and Efficiency. It will become the therapy of the future. Its advantages are many, its dangers nil.

Hemo-Therapin (Witte's Solution) should appeal to every progressive physician. It supplies needed physiological elements such as iron, phosphorus, calcium, potassium, and sodium. It is efficiently antiseptic and germicidal, owing to properly detoxicated phenols and cresols.

Over fifty thousand injections have been given, covering a period of fifteen years, to patients ranging from six months to seventy years in age, without a single unfavorable result. It offers the most rapid and satisfactory treatment for rheumatism or malaria. It is especially valuable in Sepsis of any variety—a fact that should especially commend it to the military surgeon and to the obstetrician in civil practice.

Hemo-Therapin (Witte's Solution) is supplied in ampoules. The dose is from 8 to 10 c.c. or more, according to the severity of the case.

Literature and clinical data will be sent, to physicians only, on request.

Hemo-Therapin (Witte's Solution) will be ethically advertised only, to the medical profession.

The ancients used to say—and how we did hate having to memorize all those Latin truisms, proverbs and other wise sayings—that "Necessity is the mother of invention." Truly, this has been and is being verified at the present time in a degree that was hardly dreamed of about five years ago. In all the political, national, municipal and other upheavals of the last three years, in all the inventions, discoveries and results through patient, persistent work and investigation, few things stand out as large and commanding as the newest methods of treating infected wounds and of preventing enteric infection by drinking water.

In the treatment of wounds that are caused in warfare, the factor of infection is ever present, one of the consequences being that our accepted theories and ideas of aseptic technic had to be discarded while an entirely new antiseptic technic

The Newer Therapy

recognizes the practical advantages of throwing indicated medicaments directly into the venous blood stream, to be—

More rapid action.

More certain effect.

No modification of drug action by digestive processes.

More convenient for both physician and patient.

HEMO-THERAPIN [Witte's Solution]

supplies physiologically adapted iron, phosphorus, calcium, potassium, and sodium, with properly detoxicated phenols and cresols.

Rheumatism, malaria, blood toxemia, leg ulcers, sepsis—surgical or puerperal, eczema, hemorrhoids, etc.

Special literature and clinical data to physicians only, on request.

Hemo-Therapin Laboratories

505 Fifth Avenue New York City

During Pregnancy

STANOLIND Liquid Paraffin is an admirable laxative for use during pregnancy. It produces no irritation of the bowel, has not the slightest disturbing influence upon the uterus, and no effect upon the fetus.

The regular use of Stanolind Liquid Paraffin in the later months of pregnancy is an effective means of avoiding some of the serious dangers attending the parturient state because of sluggish bowel action.

Stanolind Liquid Paraffin counteracts to a definite extent an unfortunate dietetic effect on the intestine in this manner; the concentrated diet of our modern civilized life contains so little indigestible material that the residue is apt to form a pasty mass which tends to adhere to the intestinal wall. Stanolind Liquid Paraffin modifies this food residue, and thus tends to render the mass less adhesive.

Stanolind Liquid Paraffin is mechanical in action, lubricating in effect. Its *suavity* is one of the reasons why increase of dose is never needful after the proper amount is once ascertained.

A trial quantity with informative booklet will be sent on request.

Standard Oil Company

72 West Adams Street (*Indiana*) Chicago, U. S. A.

73a

was called for and developed. The most successful method in this respect at the present time, undoubtedly, is embodied in the results of the investigations of Doctor Dakin of the Herter Laboratory in New York, whose solution of hypochlorite initiated a new phase in wound treatment. A later and more perfect development of this solution is presented in para-toluene-sodium-sulphochloramide, known as Chlorazene, which is employed in watery solution and has proved of the greatest possible antiseptic value. This was followed, and, indeed, supplemented by its modification dichloramine-T, a preparation which makes it possible to add the advantages of antiseptic oils to those of the chlorine preparations Dichloramine-T does not replace Chlorazene, rather it supplements it. There is no space here to discuss the action and uses of these remedies, but, if you will write to The Abbott Laboratories, Chicago, you will receive literature.

The local, or endermic, administration of medicinal agents has from time immemorial been popular, especially in those sharply circumscribed swellings and painful joints or other lesions that the popular usage designates as "rheumatic." Aside from several remedies like camphor and menthol, which exert a mildly and analgesic action on topical application, there are others, for instance Capsicum and Cajuput, which are counterirritants and, finally, salicylic preparations have been shown to be absorbed through the unbroken skin. There are many preparations on the market containing remedies of this class and intended for use in painful and inflammatory conditions. Among them Rheume Olum prepared by the Rheumeolum Chem. Co., Seattle, Wash., is offered, the formula being given as carrying 25 per cent of Methyl Salicylate, in addition to Camphor, Chloral Hydrate, Menthol Oleoresin Capsicum, Oil of Cajuput and Lanolin. This formula promises good therapeutic results.

The installation of facilities for cold storage and also for cold water pipes, and other arrangements for the purpose of cooling the air, present problems of considerable magnitude to hospitals. The method of cold storage is one that interests also medical men who are connected with research laboratories. Most of these problems are really more complicated than to be solved merely by the utilization of an icebox, whether it be small or large. In hospitals especially it will be the task of specialists who

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The V-E-M Applicator—
hard rubber attachment that screws onto the collapsible tube, "shoots" *ointment* up into the nose, where it stays for *hours*. Sprayed fluids quickly run down and out. This slick little device insures most effective local medication in

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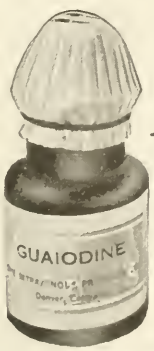
Free with every tube of
V-E-M Ung. Eucalyptol Compound
Send 10 cents for a tube of V-E-M and the Applicator (regular price 50 cents)

Schoonmaker Laboratories, Inc. 70 East 42nd St. New York

GUAIODINE

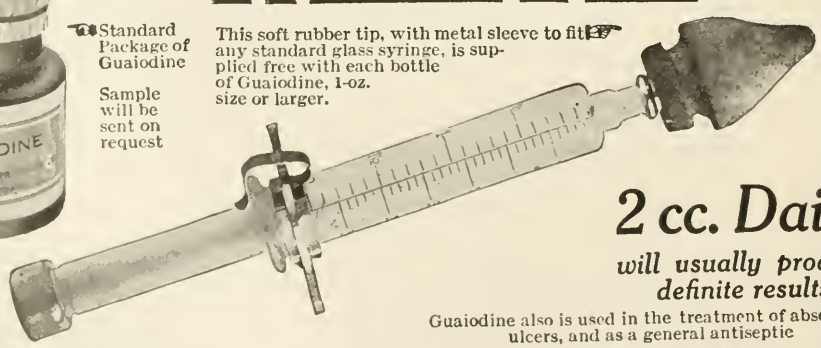
ACTS AS A SPECIFIC FOR GONORRHEA
IN A MAJORITY OF CASES



Standard Package of Guaiodine

Sample will be sent on request

This soft rubber tip, with metal sleeve to fit any standard glass syringe, is supplied free with each bottle of Guaiodine, 1-oz. size or larger.



2 cc. Daily
will usually produce definite results

Guaiodine also is used in the treatment of abscesses, ulcers, and as a general antiseptic

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MANUFACTURING CHEMISTS
DENVER, COLORADO, U. S. A.
Atlanta-Boston-Chicago-Detroit-Kansas City-Los Angeles-New York-Oklahoma City-Havana-Mexico City

DROPSIES

Dr. A. L. House, Stamford, Conn., writes interesting indorsement in behalf of ANEDEMIN wherein he discusses its value for dropsies, giving his personal experience as old prescriber. Published by manufacturers by request of author, who believes his experience would be a benefit to his brother physicians.

September 8th, 1917—Stamford, Conn., 11 Bedford Ave.,

To Anedemin Chemical Co., Chattanooga, Tenn.

Gentlemen:—

After an experience of a number of years with your Anedemin tablets, I am compelled to admit, that for dropsies from practically any cause, I have found them by far the best remedy I have ever used, and I wish to thank you for keeping them up to the standard. I have learned to prescribe Anedemin with assurance and they seldom fail me, even in extreme cases.

I always begin treatment with one tablet after meals or three times a day, swallowed with ½ glass of water; increased to two tablets after meals the second day, and in obstinate cases, have used two tablets every two hours for an entire day; and each morning, beginning with the second day, order a generous dose of Epsom Salts—(I prefer the effects of Epsom Salts to that of any other salt).

I have had bad heart cases with abdomen full of water, and lower extremities dropsical to the bursting point where the results have astonished me; patients who were gasping for breath, in a sitting position, unable to eat or sleep, have in 48 hours (Forty-eight hours) passed 4 to 6 gallons of urine, anasarca and dyspnea have disappeared like magic, and they have been able to lie down in bed and sleep peacefully for the first time in weeks.

I always prescribe Anedemin in all my Chronic Heart cases without dropsies, with equal confidence, generally not more than 3 to 4 tablets daily, gradually reducing the dose to one morning and night, as conditions improve. I have found it advisable to have patients continue to use the one or two tablets daily dose over long periods with great comfort to themselves, relieving them of dyspnea and pain—**and in all my experience I have never seen any ill effect from their use.**

I trust I am not over enthusiastic, but your records show that I order Anedemin by the thousand and naturally I would not continue to use them if I did not get results—I am sending you short records of a few cases (recent) and you may use my communications in anyway you choose for the benefit of my brother physician.

Sincerely yours,

(Sign) A. L. House, M. D.

Anedemin is with all wholesale druggists and the larger retail firms for physicians' employment only and exclusively.

have devoted particular study to the question to advise the most suitable arrangements, and, for this purpose, The Brecht Company, 102 Cass Avenue, St. Louis, Mo., offer their services to hospital superintendents, architects and building committees. This is a matter that appeals to us as being of great importance and we are glad to call the attention of physicians interested in hospitals to the advertisement of The Brecht Co.

It may not be possible for artisians and many other workers to keep their hands clean and soft, but, for the physician there is no excuse for having hands that are not well groomed in every respect. If I were a woman, I think I would be tempted to discharge the best physician or surgeon if he attempted to touch me with hands that were not clean and kept in good condition. True, there are many things that medical men must do which make it difficult to care for their hands. Often the antiseptic solutions play the mischief with them, and particularly tinkering with the automobile causes the grime and dirt to penetrate even through gloves. For this reason, it is necessary to apply regularly not only soap and water in sufficient amounts, but also some preparation that aids in removing the grime and the loose particles of skin and that softens the hands and make them fit in appearance as well as in their inherent ability for the work they are to do. Daggett & Ramsdell, of New York, claim that the best clean-up after motoring, as well as after other occupations that roughen the skin, is made possible by means of their perfect cold cream.

Better investigate their claims, Doctor, and try their preparations.

Carnation Milk

Is Economical

Carnation Milk is economical because there is less waste. It "stays sweet" until the can is opened, and for several days thereafter.

The clean, sweet cows' milk is evaporated in a vacuum to the consistency of cream, hermetically sealed in cans and sterilized. This insures Carnation Milk against all contamination. It is the safe milk for babies as well as for adults. Contains all the original content of butter fat and solids. Only part of the water is taken out.

Why not test the quality and merit of Carnation Milk? You will find that Carnation Milk meets every milk need in your home—for cooking, baking, drinking, and every other milk use. Your own experience will make you willing to recommend it to your patients.

Free—Milk Booklet

"The Story of Carnation Milk" booklet on our sanitary methods of handling, and containing 100 recipes for plain and fancy cooking — infant feeding, etc. — sent free upon request. Carnation Milk Products Company, 1125 Stuart Building, Seattle, Wash.

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"From Contented Cows"

SURGICAL DRESSINGS

Must produce satisfactory RESULTS on which depends their MERIT.

CAMPHO-PHENIQUE LIQUID

Is a Dependable and Thoroughly Reliable Surgical Dressing.

Excellent results will always follow its use in treating severe BURNS, BOILS, CARBUNCLES, BONE FELONS, also MAJOR and MINOR SURGERY.

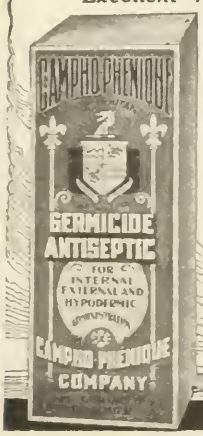
INDICATIONS—Apply pure, or dilute with pure Olive Oil, two or four parts Oil and one part Campho-Phenique. Send for Clinical Data.

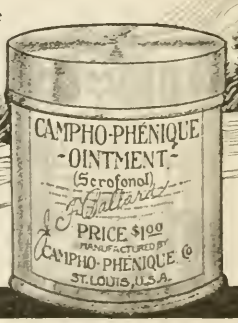
4 Oz. Bottle $1.00 1 Oz. Bottle 25c

CAMPHO-PHENIQUE CO.

ST. LOUIS, MO., U. S. A.

Always ask for original container.





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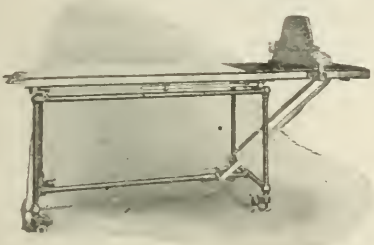

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Tables and Stands

are manufactured in a variety of designs and combinations so as to permit of discrimination in selecting an apparatus to fit the needs of the individual laboratory.

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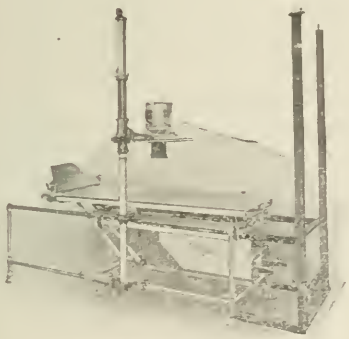

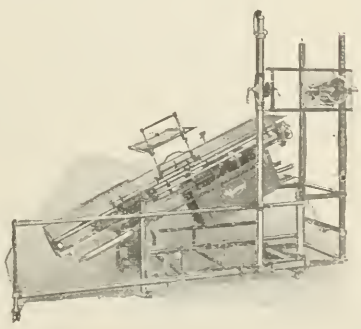

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MORPHINE AND ALL DRUG AND LIQUOR ADdictions. Treat these cases at home privately yourself. No pain, no vomiting, no hypodermics, not dangerous, positive results. Enclose stamp for particulars. Chas. H. Quayle, M. D., No. 7 Park Place, Madison, Ohio.

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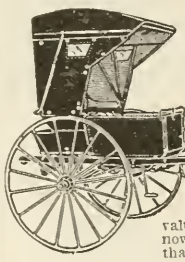
WANTED—MEDICAL SUPERINTENDENT FOR growing industrial hospital. A large future for a man of personality, imagination and initiative. Must have organizing ability. Salary $1,500. State experience and give hospital references. Address B. B. Lyons, Managing Director, Northeastern Hospital of Philadelphia, Philadelphia, Pennsylvania.



A letter—

The Eureka Co., Rock Falls, Ill.

Gentlemen:—I purchased one of your Hammock Carts last summer and the muddy roads are now demonstrating its worth to me. If the country doctors knew the value of the Hammock Cart, as I do now, I believe you would receive more than 1,000 orders in less than a week.

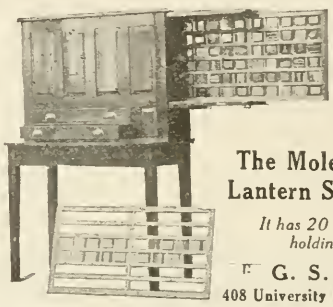
.....M. D.

(Name and address on application.)

Write for Circular C. Sheets of Testimony.

THE EUREKA CO., ROCK FALLS, ILL.
Sole Makers

PROTECT YOUR LANTERN SLIDES



By using these cabinets. Each section holds 1200 slides.

The Moler Sectional Lantern Slide Cabinet

It has 20 sliding frames holding 60 each

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A strictly private and ethical Home Retreat for unmarried girls and women during pregnancy and confinement, with best medical care, nursing and protection. A home found for the infant by adoption if desired. All publicity avoided. Prices reasonable. For particulars, prices and terms, address

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HOYT'S GLUTEN FLOUR

makes genuine gluten bread, biscuits, etc. for the diabetic and all who require a high protein and minimum starch diet.

Send for name of nearest agent and description of the complete line of our Gluten Products.

The Pure Gluten Food Company
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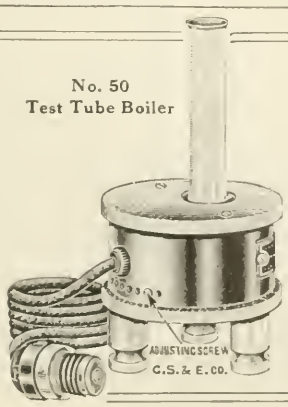
No. 50
Test Tube Boiler



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QUICKLY

Just connect to ordinary light socket

Carry it in your grip.

Ask your dealer or write direct for Bulletin 115

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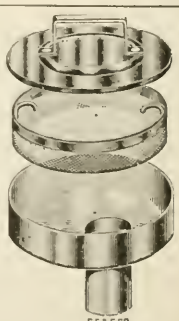

No. 52 Sterilizer

Genius Pays Attention

to the minor ailments that often seem of major importance to the suffering patient. Cervical erosion or ulceration, congestion, hypersecretion, and relaxation of the vaginal mucosa calls for far more efficient local treatment than the routine use of the tampon or douche.

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are astringent, antiseptic, soothing and healing. Convenience in application and absence of irritating or any prejudicial properties enable the physician to not only conserve his patient's comfort, but improve or cure existing conditions.

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Tobacco Heart

clinical results noted by many members of the profession indicate that

ANASARCIN TABLETS

restore normal frequency—Increase Liver and Kidney activity—Offer opportunity for return of normal conditions.

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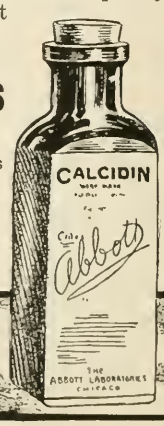

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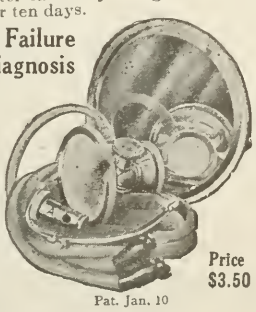

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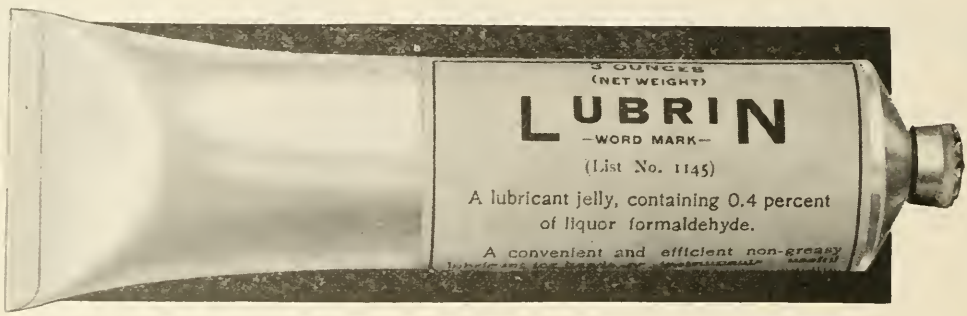

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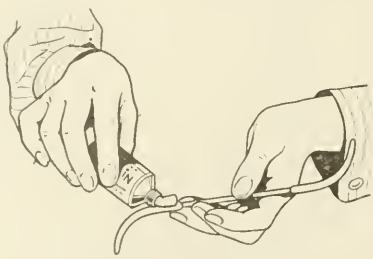

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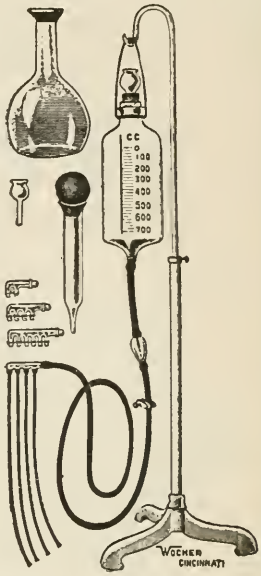

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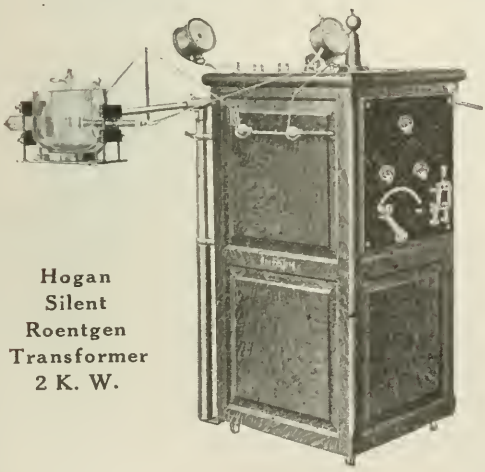

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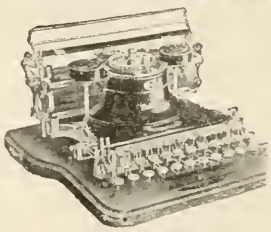

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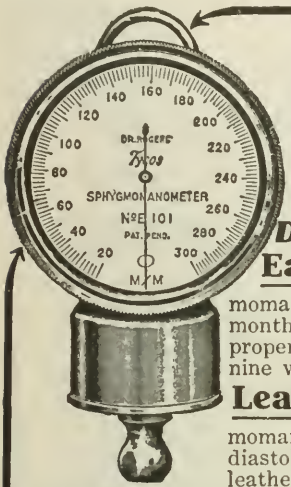

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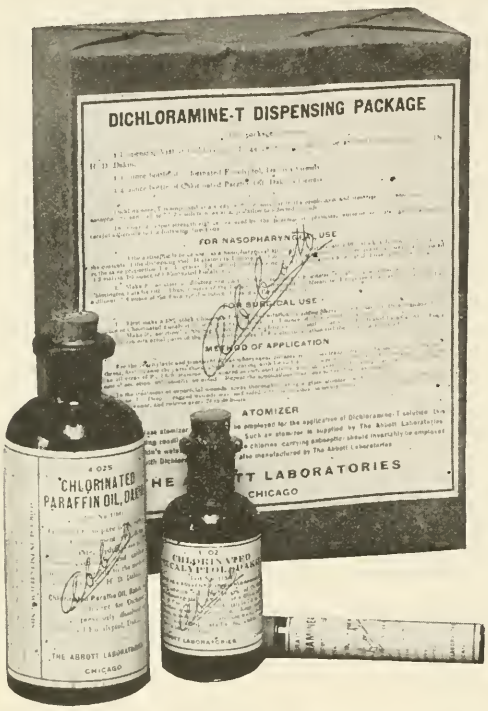

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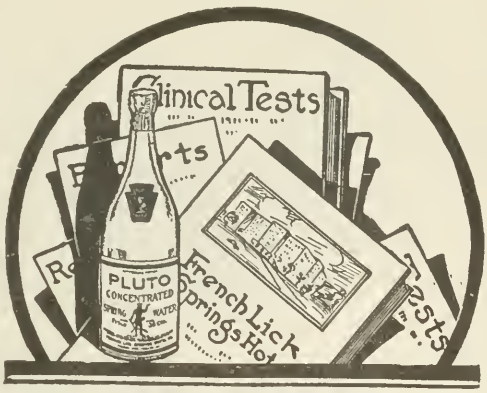

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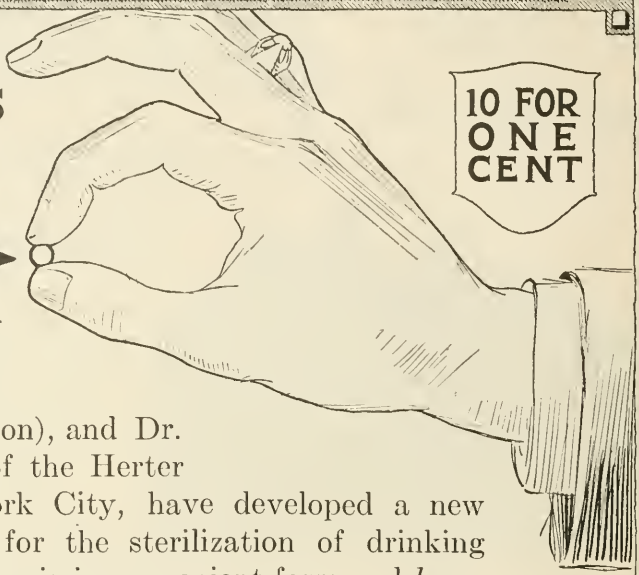

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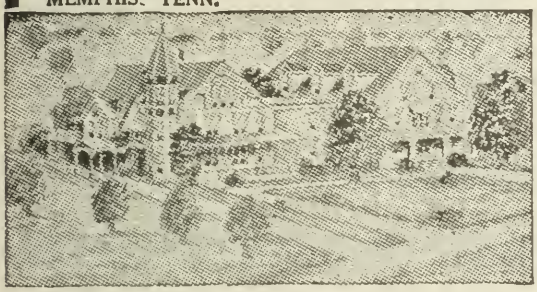

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USE
AMERICAN PRODUCTS

Cystogen-Aperient

If Uric Acid is a Factor—Clinical Results Prove Cystogen-Aperient THE REMEDY.

Its early administration in Lithemia may forestall such serious consequences as increased Arterial Tension, Gout, Arterio-Sclerosis and Contracted Kidney.

Wherever faulty elimination is an etiological consideration, ***Cystogen-Aperient*** is indicated.

FORMULA

Cystogen grs. v. Sodium Phosphate grs. xxx. Sodium Tartrate grs. xxx. Dose, heaping teaspoonful in glass of Water, three times a day.

Samples and Literature on Request.

Cystogen Chemical Co., **St. Louis, U. S. A.**

This Photograph Was Taken on the *Fifth* Day

It shows how a second and third degree gas burn responded to the Cerelene treatment. On the 21st day the patient was discharged from the hospital and on the 31st day was pronounced **cured.**

CERELENE

The New Resinous Wax Treatment for Burns—*Holliday* Formula—

is being employed in the treatment of burns in the largest industrial institutions. It has the endorsement of physicians and surgeons of the highest standing.

Cerelene (Holliday) is a painless dressing. It is an "Elegant" preparation, applied hot by a brush or a spray. It is **not** a mixture but a definite compound—a chemical compound—not a mechanical mixture.

On request we will gladly furnish full particulars regarding "Cerelene", its uses, method of treatment etc. Send for booklet—"Wax Dressings for Burns."

Holliday Laboratories

Pittsburgh, Pa.

H. J. Baker & Bro, 81 Fulton Street, New York City
Sole Selling Agents

The reaction which takes place when

Betul-Ol

(Lin.: Chloral-Mentho-Methyl: Salicyl:)

is rubbed or painted on the skin and water-wet paper applied, is somewhat difficult to explain, but it is undoubtedly one of our most effective and harmless counter-irritants. **BETUL-OL** is especially useful where local application of salicylic preparations are prescribed to relieve

THE SYMPTOM PAIN

in Sciatica, Lumbago, Articular Rheumatism, Myalgias, Neuritis.

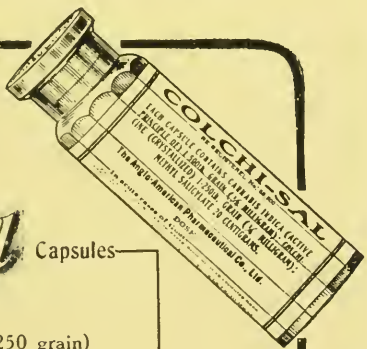
The absorption of salicylic radical is proved by its presence in the urine after application of **BETUL-OL.**

ANGLO-AMERICAN PHARM. CO., Ltd.

Samples and explanatory literature on application to the

U. S. Agents, E. FOUGERA & CO., Inc., New York.

Reliable in Gouty Manifestations



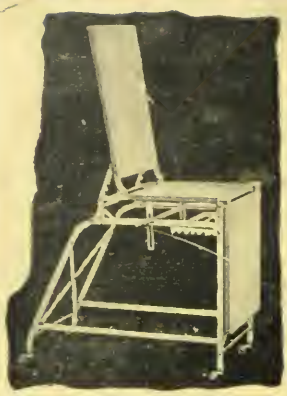
Genuine **Colchi-Sal** Capsules

Each capsule represents ¼ milligram (1/250 grain) crystallized colchicine dissolved in 20 centigrammes of methyl salicylate from *betula lenta.*

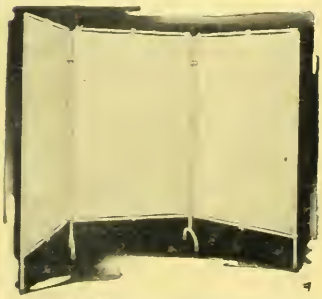
Dose: From 8 to 12 daily in acute attacks of Gout.

ANGLO-AMERICAN PHARMACEUTICAL CO., Ltd.

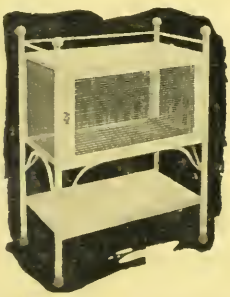
U. S. Agents - **E. FOUGERA & CO., Inc.** - - **New York**



THE U. S. ARMY OPERATING CHAIR TABLE, PORTABLE TYPE
Thousands of these will be used in the American field hospitals and dressing stations.



GOVERNMENT STANDARD BED SCREEN



NAVY BEDSIDE LOCKER
The upper compartment is enclosed with wire netting, with steel shelf below.

STEEL CHAIR AND ADJUSTABLE STOOL
The steel chair is made with exceptionally large round seat of perforated steel.

The Government Demanded

QUALITY—
PRICE—
SERVICE

WE GAVE IT

on over 15,950 pieces of steel Hospital Furniture which have either been delivered or are now going through our factory. This is undoubtedly more Hospital Furniture than has been made for Government use by any other manufacturer.

During this entire period we have been able, in addition, to take care of our thousands of customers, over half of the medical profession now buying from us. Every customer demands the same three essentials of Quality, Price, and Service, and we are able to satisfy them, even as we have the Government.

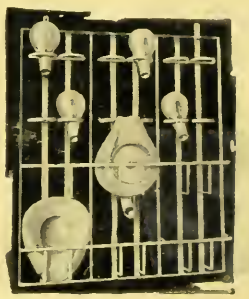
The illustrations will be interesting to every physician, surgeon, and hospital manager as showing the U. S. standards of Hospital Furniture as selected by the Government.

Frank S. Betz Co.

Hammond, Indiana

ALL-STEEL INSTRUMENT CABINET
Made throughout of steel with steel sides and door and steel shelves, while the back legs are designed to permit the cabinet to be placed directly against the wall.

AN EXAMINING AND OPERATING CHAIR TABLE
A counterbalanced type, permitting easy and quick adjustments.



URINAL AND BED-PAN RACK
A standard design, holding 12 urinals and 6 standard bedpans.

ALL-STEEL INSTRUMENT TABLE
Both shelf and top are made of sheet steel, with roll edge.

BEDSIDE TABLE
Made with genuine porcelain enamel top and shelf.